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IS "NEW" ARCHITECTURE A POSSIBILITY?

IN a recent article we stated our reasons for thinking that the deliberate effort to express our requirements in a new architectural medium was doomed in the nature of things to failure. We have since received letters which show that the arguments we brought forward in support of our contentions have not carried conviction, and, as we think the belief that it is possible to create style is what theologians might term a "pestilent heresy," we propose to further discuss the issue raised.

It is argued that Greek architecture was perfectly adapted for the needs of the day; but it must be remembered that, excepting the Greek temples, than which few buildings erected by mankind had fewer practical needs to meet, and the Greek theatre, which was largely an arrangement of curved seating planned on suitable sites, and a few other buildings of no great complexity, we have little to show us how Greek architecture met utilitarian requirements. It has an immeasurable æsthetic value, coupled with an exceedingly small practical significance. As we know it, from its inception to its culmination, it aimed at perfection in form within very narrow limits. To a smaller extent perhaps than any form of architecture we know can we term it inventive or indicative of any striving after originality.

It was left to the Romans to express every want of a more complex civilisation and greater wealth in building; but the accusation levelled at Roman architecture is that *qua* architecture it was unoriginal. Our critics are never tired of telling us that the Romans used, or rather misused, the details of their legacy from Greece for quite other uses than that for which they were intended. The column was used for decorative and not constructional purposes; the Colosseum was cloaked with ranges of Orders instead of an attempt being made to express the construction behind truthfully; last, but not least, wherever the Roman Eagles were carried her people erected buildings which resembled those of Imperial Rome, whose cast-iron uniformity echoed no note of time or locality. We do not agree with those who underrate and belittle the contributions of Rome to architecture, but many of the facts stated are perfectly true, and if it be the aim of architecture to express structural needs directly and obviously, and to emphasise the use of certain materials, then indeed the greatest builders of the world are false guides to posterity.

In Gothic construction we discern inventiveness of a high order, but in the course of centuries the efforts of builders were directed to the solution of a comparatively small range of problems, the chief of which were the covering of wide spaces by stone roofs and the cutting up of large window openings by bars; and, marked as some of the changes of its development seem to us, they must have passed almost unnoticed at the time, and we do not think the greatest innovator in mediæval days did more than slowly grope his way out of practical difficulties, insensibly producing the changes in detail which we now consider as landmarks in architectural time.

And in like measure the Renaissance is not to be considered so much as a new style illustrating the inventiveness of mankind as the effort to reproduce the newly-rediscovered wonders of Roman architecture by peoples who had not the material or data for exact imitation. The egg and dart, the acanthus, and the contours of mouldings themselves have changed only in degree since the days of Athens. Changes must always be going on, but they are changes which can only be apparent, judging by what we know of the past, after a lapse of centuries; and our point is that they are changes which have arisen unconsciously, and that what is most apparent in architecture, if we look at it broadly, are its unchanging characteristics. We could put on a fair-sized sheet of paper most of the elementary forms of which all the known styles of architecture are composed, while no library would contain the countless melodies in the shape of architecture which have been played with the same simple series of notes.

Where progress is needed by mankind it is made, and made readily, as the great field of utilitarian planning evidences. We do not often pause to consider, what is indisputably true, that hardly any buildings having marked utilitarian and practical wants are what they were fifty years ago. If the architectural styles of past ages hampered us, as we should be hampered by the adoption of what passed for planning fifty years ago, new forms would have been evolved; but the fact remains that we can express our necessities to-day in architectural terms which may be borrowed from those of Rome itself without more difficulties than the designers of the Roman baths would have found in the use of Roman architecture. And if this be so, why should we trouble ourselves or regret our inability to think out what is new? The wish to do so rests on as unreasonable a basis as the objection of a man to the form of loaf which his father ate.

The analogy of style with language is a very complete one. We do not, as one of our correspondents state, express ourselves to-day in Elizabethan English, but we do express ourselves in English, and not in Esperanto. That is to say, the great bulk of the English we use to-day is the language of Shakespeare; the additional words we have added to it are few in number compared with the mass we have added them to, and similarly the number of words that have become obsolete in meaning, and which are therefore subtracted from the language, are also almost negligible in quantity.

The architecture of the revivals was similar to an attempt to reuse obsolete words and obsolete methods of expression, but the best work of to-day is in no sense a revival, but rather a use of current idiom, and only time, education, and continuous effort are necessary to form this architectural language into a national one which we shall use as our vernacular method of expression.

Now, if we carefully examine the architecture of Herr Otto Wagner or examples of l'Art Nouveau or modern German work and analyse them, what do we find that is distinctively new?

Do these buildings tell us any more than those of the past that they are built in certain new materials, or can we say that the brain of man of to-day has altered so that the forms of our Georgian forefathers no longer give us the same sense of pleasure that they gave to people of the past?

The answer to these questions must, we think, be in the negative, and, being so, the necessity for the "new" forms depends solely on whether they please the eye and satisfy critical taste. If the law of gravity had somehow been modified in the passage of time doubtless forms which affected our senses unpleasantly as suggesting instability might satisfy us now, or, on the other hand, forms which satisfied us two hundred years ago would affect us unpleasantly to-day. If, again, our sight had grown in keenness it would be natural to demand greater delicacy in decoration, or if it had become less keen we should want coarser and more prominently marked detail to produce the same effect on our senses; but we know that nothing of the kind has happened. Were mankind to find that its health was benefited by living in rooms lighted from below we should find a means of meeting the want in a fresh architectural manner, and a new style might be evolved to meet the fresh requirements, but this has not come about. The modern world has demanded greater convenience in the arrangement of buildings, and the result is at once seen in the development of architectural planning, but our æsthetic senses remain unchanged, and so the means we take to meet the æsthetic appeal remain in large measure unchanged also.

The convenience of Esperanto, which can be readily learnt because it is much in common with many languages, is no convenience to nations whose daily life and wants involve almost exclusive association with the people of their own country, but if the units who compose the nations of modern Europe could be arbitrarily mixed without the possibility of segregation a universal language on the lines of Esperanto might naturally come into being.

We are told that the Ilkeston School is decorated with bright colour "after the manner of the two surviving pieces of art that have come down to us, namely, canal barges and caravans"; but, in the first place, neither canal barges nor caravans are buildings, and, in the second, do the colours of these objects give us any deep and permanent satisfaction?

Mr. Widdows says that he has tried to bridge over the centuries and in a measure to get back something of the spirit of the Middle Ages in his use of colour; but is not this an admission that he too is harking back and trying to revive the colouring of past ages, and may it not be that our disuse of these colours represents a development rather than a falling away from grace? We have seen the interiors of Cardiff Castle, designed and coloured by Burges in the manner of the Middle Ages, we have seen Viollet-le-duc's church of Bon Secour, near Rouen, which is similarly coloured, and neither of these examples has given us a wish to see the experiment carried farther.

With the suggestion that the Institute would do good by calling together the "best men in the land to consider the possibilities of expressing architecture in modern terms and giving our art a new vitality" we are in complete disagreement, as we feel that there are no modern terms, and there is no evidence at any time in architectural history that there ever were "modern terms," while the "new vitality" is far more likely to arise out of the work of those who have least thought about creating anything new. Progress in matters of æsthetics has, surely, never been made either by the deliberate effort of invention or the deliberate attempt to reproduce what has been done before, but by the determination to do in each given case the work required in the best manner. And the best manner involves the use of a medium of expression or style that we are absolutely familiar with.

What is and will be the greatest rarity to the end of all time is great excellence, and perfect works of architecture invariably contain little or nothing which has not been done before and little or nothing which will not have its effect on what is to come; but they represent the complete mastery of a language which is known and unerring skill in the arrangement of the words of which that language is composed.

NOTES.

A Parliamentary Committee of Art.

We are glad to note that the Government is to add to the numerous Parliamentary Committees now existing a Committee on Fine Art. In whatever light we look at this it seems to us a good step. If it represents their serious conviction that Art concerns the national welfare, it is good; if, on the other hand, they look on it as a popular move, it shows that in their own interests they recognise that the support and furtherance of Art is popular. If it represents, in the third place, the pious wishes which have been expressed by criminals nearing their end, we still welcome it, remembering how many have, like Madame de Brinvilliers, delighted the world by the reality of their penitence. We are not promised rare and refreshing fruits, for which we are duly thankful; we are not even promised the Ministry of Art which we, with others, had advocated; but the formation of such a Ministry will come more easily in the future because the Government recognise by constituting a Committee that Art should not be neglected. The Committee once formed will be an outpost which must be attacked and captured by those who advocate the formation of a Ministry, and instead of trying to enlist the support of a number of Members of Parliament we should be able to enlist the support of the new Committee in attacking the Government itself. But it may be that it is only the pious expression of the moribund, and that part of the epitaph to be written over the tomb of the Government will be "Had it lived longer it would have done great things for Art." In any case, we hope the new Committee will overcome the perils which beset childhood and prove a much-needed force for good in the land.

Summer School of Town Planning.

A course of Lectures and Demonstrations in Town Planning is arranged to be held at University College from August 3 to 15. The fee for the course is 1½ guineas, and arrangements can be made by intending students for accommodation during the course at the College Hostel at Ealing. Professor Unwin is to give a course of seven lectures on the "Practice of Town Planning," in which he will deal with the limitation of the size of plots, the workshop and factory and their relations to dwellings, commercial centres, the element of design as applied to town-planning, problems of transit and town extension; while Professor Adshead, in conjunction with Mr. Patrick Abercrombie, will give a course of six lectures on "Town Planning in the Past and in Foreign Countries." The Town Planning Act and other legal aspects of the subject will form the title of three lectures to be delivered by Mr. Edmond R. Abbott, solicitor; and Mr. G. L. Pepler will deliver two lectures on the "Surveying and Engineering Problems in Connection with Town Planning." Other lectures will be given by Mr. C. J. Jenkin, Dr. Brinckmann, of Germany, Mr. John Nolen, of America, Mr. H. V. Lanchester, and Mr. Mawson; and a number of excursions to Ruislip, Tottenham, Ealing, Hampstead, and Letchworth have also been arranged. The programme is an unusually complete and comprehensive one, and should be extremely useful to many of those who are likely to be brought into contact with this modern development of architectural practice. We have heard it said that town-planning schemes have got too exclusively into engineering hands, but there is no reason why this should be the case, as there are so many facilities for obtaining the required information and data. Rightly looked on, town planning should afford a good opening to the old-fashioned type of country "architect and surveyor," since surveying forms a valuable asset to the town-planner, who primarily deals with the allocation of sites rather than the detailed designing of buildings. We can never know too much, and the architect who has dealt all his life with the design of buildings only will find himself in need of knowledge which is A B C to the architect and surveyor; while the latter will find he wants the breadth of view and sense of architectural fitness which his restricted training and opportunity have sometimes failed to give him. Town planning would have become a great art in the days of the Renaissance, and if we have sufficient calibre to cope with our opportunities there is no reason why it should not become a great art to-day.

The Town Planning Professorship at University College.

It is with great pleasure that we learn that Professor Stanley Adshead has been selected for the new Professorship of Town Planning at University College, as he has filled a similar position in connection with the University of Liverpool with great success. What is a loss to Liverpool will be a gain to London, and if any town in the country has much to gain from the education of its citizens in town planning it is the metropolis. The growth of many of our provincial towns depends on special industries. The growth of London has wider and deeper roots, and depends mainly on its position as a great world centre and pleasure resort for this and other countries. It is appropriate that Professor Adshead should already have put some of his theories into actual practice in the excellent work which he is carrying out on the Duchy of Cornwall Estate in Kennington. We hope the transformation of that dreary district will be carried on steadily under Professor Adshead's designs, and that a new "Georgian" period may be added to that of the past. We have commented on the excellent programme which has been arranged in connection with University College, which is instituting a course of town-planning visits and lectures during the summer vacation, in connection with which the newly-appointed Professor is to deliver a course of lectures on the Historical Aspects of the Town-Planning Movement.

A Great Opportunity.

We are glad to see that Captain Swinton and Mr. Percy Harris draw attention in the *Times* to the opportunity of dealing with the Covent Garden district afforded by the recent sale of the estate by the Duke of Bedford. There can be no dispute that this district is in need of development, and that its present condition is not in conformity with the importance of its central position. Whether this development should be brought about by the improvement of the market and its surroundings, or by its removal to a more convenient situation where it can be fed by rail and river, is a matter on which opinions may differ. Mr. Percy Harris, who favours the latter method, now makes the reasonable suggestion that "if the new owners before parting piecemeal with their estate would get in touch with, say, the London Society, and approach the County Council, they would be setting an example of public spirit that would do incalculable good to civic government." Even though this exact procedure does not commend itself to the new owners, there is evidently here a great opportunity for reconciling public and private interests to the advantage of both. But whether this estate be dealt with by the combined action of the owners and the public authorities, or by the owners alone, the essential thing is that it should be dealt with as a whole on some general improvement scheme, and that the scheme should be worked out before isolated pieces of the site pass into other hands. Public opinion is ripening fast on the need for civic improvements and on the responsibility attaching to the ownership of property, and it is not likely to forgive the omission to deal with this district now that an opportunity has arisen.

THE ARCHITECTURE OF GENOA.

I.

THERE are various ways of approaching the study of historical architecture, ways appealing to the different tastes of men, but to many who write and read the pleasantest method of all is to take some ancient city and trace its story in its crumbling stones. For there is a personality in every historic town, and in this great Mediterranean seaport, with its busy commerce crowding its quays, the intangible fascination of Italy is as real—if not as obvious—as in the mouldering antiquity of Ravenna.

"For me," wrote Arthur Symons, "cities are like people, with souls and temperaments of their own: and it has always been one of my chief pleasures to associate with the souls and temperaments congenial to me among cities."

So, although to an architect the first concern must be with elemental principles of æsthetics and of construction, he may nevertheless obtain a more intimate friendship with the buildings around him if he be limited by the ambit of a city's walls. Within their circuit he tramps the streets and lives his life for the time being, becomes in fact a citizen by adoption.

Few of those whose fancy leads them thus have made Genoa their theme. The very activity of the place seems to have deterred them, as though for such a sentimental taste the only fit environment should be the hoary peace of a cloister. Many writers of discrimination have passed through Genoa unmoved, have even failed to retain any recollection of her many-sided attraction. They may have marvelled at her Street of Palaces, or commented on the picturesque bustle of the harbour, but to them she has nothing to say, and they continue their journey to Rome or to Florence in order to commune with the past.

To those who have realised her charm the first thought will always be of the unique situation which has earned for the city the title of *La Superba*. On a curving bay, surpassed in beauty only by the Golden Horn, where the slopes of the Apennines merge steeply into the unrivalled blue of the Mediterranean, the first Genoese made their home. The wonderful climate and atmosphere of the Riviera, the rich colours of the tropical vegetation, render the surrounding scenery exceptionally beautiful. The small promontories of the Lanterna and of Sarzano close the panorama on either hand. Between these two points lies the old city, and in early days the houses clustered beneath the latter hill, then crowned by a Roman fort.

At the present time, in spite of the fact that for part of its area its inhabitants are the most densely packed in the world, the villas and the gardens of the wealthy have gradually covered all the neighbouring slopes, while just over the ridge on which the Lanterna still stands may be found the smoky chimneys of industrial Sampierdarena. The harbour has been increased again and again, and projects are in existence already to enlarge its capacity. The railway from Milan has been doubled within recent years, and is now to be relieved by yet another line. A quarter of a million people form the population of the city proper, but on both sides extends a long chain of suburbs united with Genoa by train and tram. In the narrow streets of the old town the crowds indicate one of the busiest centres in Europe. The newer quarters form a striking contrast, with lines of palatial buildings and expensive shops. But whether one looks at old or new, at harbour or hillside, there is nothing ugly in this city as we know ugliness in England. The sunshine is kind, and covers a multitude of sins no doubt, but there is nothing of the sordid squalor of Naples, where Nature has been prodigal enough.

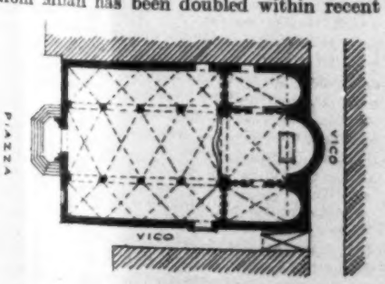


Fig. 1. SS. Cosmo e Damiano, Genoa: Plan.

No Scale. Sketch by the Author.

Genoa is, above all, a beautiful city, a magnificent city, and merits at the present time, as much as in any former age, her ambitious title. The vivid life which has palpitated through all these years without cessation communicates itself even to a stranger and inevitably attracts anyone whose delight is rather in the market-place than in the cemetery. It is perhaps for this reason that I have never visited the place which is the *capolavoro* of the district to the modern Genoese. The Campo Santo at Staglieno is the most remarkable burial-place in Europe. Its admirable architecture may be seen from the grim heights of the Castellaccio more than 1,200 ft. above the quays, with gleaming white marble tombs dotted among the dark cypresses far below. But in the fashionable shops of the town one sees more detailed views of these tombs. The vulgarity of their flaunting grief, the vulgarity of the modern Italian in thus prostituting the beautiful Carrara stone and the whole art of sculpture, is the one blot on the city's reputation. Save for this, the new streets and buildings do not jar upon the historic sense.

But to see Genoa properly one must live down by the harbour, in some hotel above the dark arcades where drunken foreign sailors sing and swear the whole night long. Here, among the odours of marine cook-shops and the strange little stalls where seafarers satisfy their scanty needs, with the dim light of old oil-lamps barely illuminating the mediæval arches and the vaulting, one can picture the life of a thousand years ago, when Genoese sailors would be celebrating in this very spot a victory over the Pisan fleet.

The streets of the old city are incredibly dark and narrow. Many are only 6 ft. wide, others only 4 ft. Few of the houses are less than six stories high. In these alleys one never sees the sky save by a gymnastic exercise. Yet these were once the homes of the proudest nobility in Italy and were filled with sumptuous furniture. Over the doorways, sometimes on other parts of the façade, even up to a great crowning cornice, is sculpture of every period and in every kind of marble. Dainty carved or painted figures of goddesses and cherubs decorate some of these buildings, though it is difficult to see them from below.

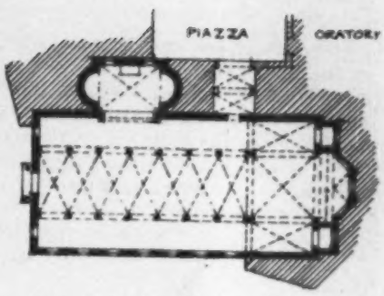


Fig. 3. S. Donato, Genoa: Plan.

No Scale. Sketch by the Author.

Especially in the later streets, those laid out in the sixteenth century, the houses are built on terraces excavated in the steep hillside, but on the old hill of Sarzano the same *salite* or sloping alleys may be seen.

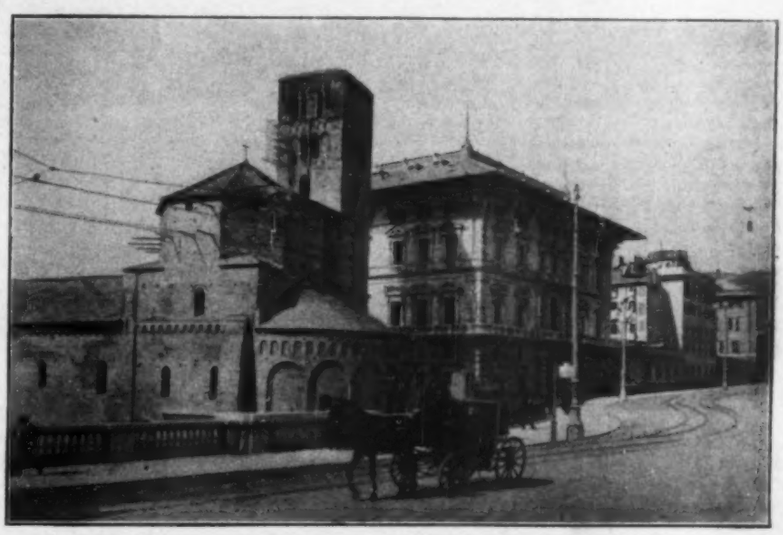


Fig. 2. S. Stefano, Genoa.

Such is the general appearance of this interesting city.

II.

Few relics remain of the beginnings of Genoa, but a paragraph is necessary to describe its origin. As a seaport it has been famous from the earliest times, and the first inhabitants are known to have been in the district in the Bronze Age. These Ligurians were a branch of the Celtic stock, akin to the Auvergnois and the Bretons. Naturally they were mariners and their ships eventually crossed the Mediterranean. An alliance with Carthage ensued, but in 222 B.C. they came under the Roman yoke as part of Cisalpine Gaul. Though Genoa was a confederate city under the Republic and a municipality under the Empire, this period is commemorated only by a few battered inscriptions. Possibly the continual strife of the Dark Ages accounts for so remarkable a lack of remains. Four successive waves of barbarian invasion swept over the town between 470 and 640, when the Lombard Luitprand is recorded to have founded the first two churches there. It was about this time that the Saracen invasions began, destined to harass the coasts of Liguria and the neighbouring islands for four centuries. After a particularly fierce attack on the city, then situated close to the harbour, in the year 860, the Bishop decided to move his Cathedral from S. Siro (still existing) to San Lorenzo, and also to build

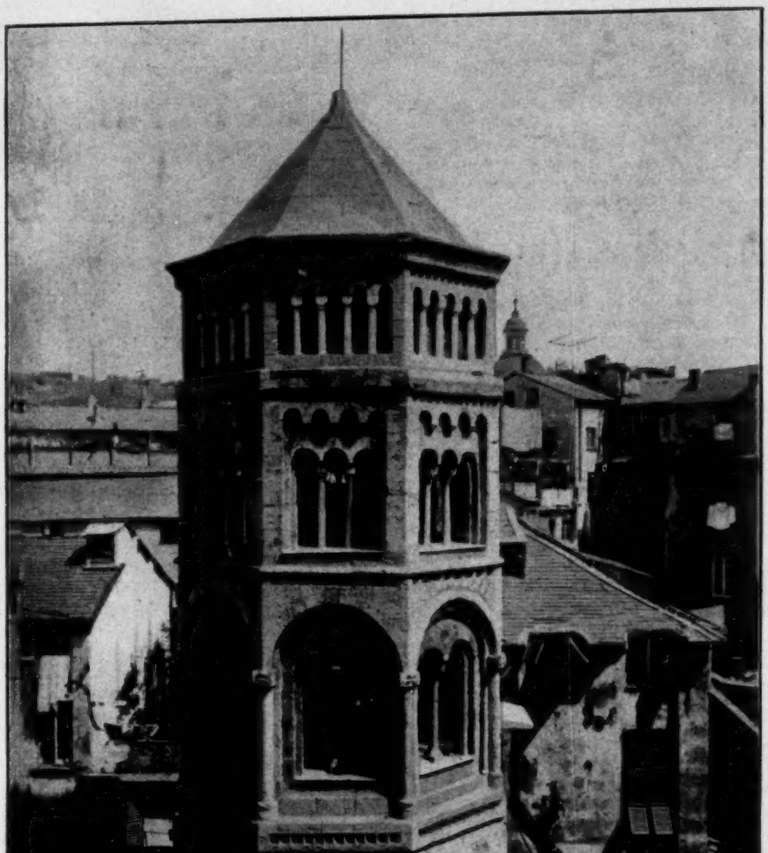


Fig. 4. S. Donato, Genoa: Campanile.

a castle on higher ground, where the people could take refuge from marauders. The ninth century saw Genoa established in Corsica. In 1017 Genoa and Pisa, by this time the most important towns in Italy, jointly attacked the Saracens and drove them out of Sardinia. But a dispute as to the division of the spoil began a long period of war with Pisa, only to end in the final defeat of the latter in 1284.

The Romanesque architecture of Genoa is the earliest remaining to us, and, although scanty, it possesses many distinctive features.

The church of SS. Cosmo e Damiano (see Fig. 1) was in existence in 1004, and the actual date of its erection seems uncertain. It stands in a very small piazza, approached by an archway, in the heart of the old city. Crowded among lofty houses, its sturdy outline is almost lost, but the Romanesque arcaded central apse may be seen among these buildings. The plan consists of a nave and choir with two aisles, each terminating in an apse. The vaulting is supported on typical heavy piers of grey stone, and on columns of black and white marble. It is evident that this church has been restored, but the work has been done with excellent judgment, and must have greatly improved its appearance. On the west front is a Romanesque door with recessed jambs, and in the north wall another of a similar type.

Of about the same date, possibly a few years earlier, is the campanile of San Stefano (see Fig. 2) in a remote part of the city. The graceful arcading of this little tower has, however, slightly pointed arches, and therefore would appear to have been altered after its reported erection by Bishop Teodolfo in 969. The rest of this church dates from the fourteenth century and has been very freely restored. It is situated to-day on the new Via Venti Settembre, just where that broad and finely-engineered thoroughfare is crossed by the bridge of the Corso Andrea Podestà. From the bridge a good view is obtained of the choir and campanile of the church.

More interesting than San Stefano is the church of San Donato (see Figs. 3 and 4) on the slopes of the old hill where the castle stood. The campanile here is of octagonal form, and is one of the most attractive I have ever seen. The arcading, so characteristic of Lombard influence, diminishes and becomes lighter at each upward stage. The tower is crowned by a pyramidal roof built of large blocks of stone. Unlike the majority of such examples, it rest on piers at the crossing of nave and "transept" below. The nave is vaulted, the aisles spanned by a pent-roof, and the apse forms a semi-hexagon. The nave has an arcade, triforium, and clerestory, half the columns of the former being black and the remainder black and white. The west front is of unassuming but admirable design. The central doorway is a really beautiful composition, with archaistic detail showing the birth of Gothic, illustrated also in the rose-window and the pointed gable-arcading above.

Last among Genoese churches where Romanesque influence is the prevailing note must be mentioned Santa Maria di Castello, the ancient fane crowning the steep little hill of Sarzano on the south of the old city. This is perhaps the building in which the antiquity of the place may best be felt. In spite of constant alteration and restoration it still remains as an isolated refuge, though surrounded by swarming houses clinging to the slopes. It is approached by winding streets with the gradient of a staircase and rises on a podium of steps from a small piazza. A relic of the Roman fort formerly occupying the same site may be found built in as a lintol over the Romanesque doorway at the west end. The eight round arches of the nave arcade have Corinthian and Composite capitals, many of the columns being antique. The choir dates from the fifteenth century and is of little interest, but some of the long range of Baroque chapels on the north, especially the second, are worthy of attention. The church contains several interesting monuments and *objets d'art* of all periods. The cloisters on the south side have frescoed vaulting and are planted with lemon-trees. A fine view of the harbour and the sea adds to the attractions of the architecture.

Consideration of the remaining examples of Romanesque architecture in the city, the nave of the Cathedral and San Matteo, may be deferred to the next section, for in each of these buildings the dominant styles are Gothic and Renaissance.

The churches I have described have a greater value than architectural historians seem to admit, for they are all we have to commemorate that period when Genoa first became a vigorous and important maritime power. Taken as a separate group they show as a series the development of mediæval architecture in Italy from its early beginnings in the traditions of classic Rome, through the period when the German tribes introduced the delicate arcading so familiar as a Lombard characteristic, up to the time when we can recognise the Gothic style appearing over the Alps from the rich churches of France. The campanile of San Donato and the doorways of several of these Genoese churches are worthy of a wider fame.

M. S. BRIGGS.

(To be continued.)

DISTRIBUTION OF PRIZES.

On Monday last the new President of the Association, Mr. Maurice Webb, presided at his first meeting on the occasion of the distribution of the prizes gained by students during the year. They were given away by Mr. Herbert Baker, one of the most eminent architects of to-day, who will leave the architecture of our times richer than he found it. Mr. Baker is one whose work speaks for him with greater eloquence than can be put in words, and nothing he said would, we feel, have appealed to the assembled students as being particularly inspiring. Mr. Webb made a terse and excellent speech, in which he briefly reviewed the present work and future aims of the Association Architectural School. It was pointed out that it was the only architectural school in the country that was entirely self-supporting and carried on by architects for architects without any outside aid or control. The School now numbers sixty-three day students and thirty evening students, and under the control of Mr. Robert Atkinson has reached an exceedingly high degree of efficiency, as the work we have illustrated in our Students' Section has already testified, and as will be even more apparent to all from the work we hope to illustrate later on.

The Evening School is to be rearranged and reorganised, and Mr. Webb referred to the necessity of the Association for enlarged premises in the near future.

We were delighted with the evident great and deserved popularity of Mr. Robert Atkinson, as was shown by the applause with which his name was received by all the students present. We have already referred, in a "Note," to the general characteristics of the designs exhibited at the Association, which formed the collection sent from various schools to Paris, and we have this week illustrated some of those from the Royal School of Art, while those of Liverpool will be shown in our columns at a later date; and we shall also be giving some of the work of the Aberdeen School, which is unrepresented at the Association, but which reaches a high standard. We give on this page a list of the Association prize-winners, but may make a few brief comments on some of the drawings here.

Among the drawings on the ground floor which may be mentioned is the carefully-designed Monument to the Dead by Mr. E. A. D. Tanner, who wins the Andrew Oliver prize. The design is dignified and restrained, and shows knowledge of detail. The Fireplace for a Town Hall is also good. We like Mr. Walch's monument design for Waterloo, which is excellently conceived.

Among the drawings in the gallery above is a good design, by Mr. W. T. Ching, for a City Steeple after Wren, and some good drawings by Mr. B. George. The Jarvis Scholarship designs, by Mr. W. S. Forbes, are forcible and effective, while those of Mr. R. A. Duncan (A.A. Travelling Studentship) reach a high standard. The figures on the chimney-piece are a little too large in scale, otherwise the design is dignified and conceived on strong, effective lines. His ceiling is a good piece of design, with a cleverly-coloured elliptical centre-piece. Mr. J. H. Jacob submits a very good design for a small scheme of Municipal Buildings which are conceived in a dignified manner. Mr. C. B. Brook's design for a Pompeian interior is good, but his small Lamp Standard is even better. Mr. P. Butt gives a very dainty and carefully-detailed design for an Adam Ballroom, which is one of the best designs on view; while Mr. James Burford sends a design for Municipal Buildings in a neo-Grec manner, which is marked by much originality. Mr. D. C. L. Derry shows a pleasingly-coloured design for a City Steeple, which is rather too much like St. Martin's, Ludgate-hill to show his ability in design. Mr. H. F. Gossling's design for Municipal Buildings is a clean and good essay in design.

Most of the drawings sent from the First Atelier are well worth attention and commendation. Mr. Percival Ware's Church is very interesting and suggestive of French influence, while Mr. Adrian Berrington shows in a magnificent pencil-drawing a Design for a Church, illustrating the picturesqueness and dignity which can be obtained by the proper use of the Baroque style. The Doorway design by Mr. Robert Low is dignified and clever in treatment.

The drawings of the R.A. School are disappointing as compared with the others we have mentioned, though some good designs are shown, and the work of the Glasgow School, some of which we have recently illustrated, is good, though too absolutely French in type. On the whole the work of the Royal College, Association School, and First Atelier are easily the best of all shown.

PRIZES AND STUDENTSHIPS, 1914.

The following are the Council's awards:—

Lectures.

Greek and Roman Architecture: Book Prize—D. S. Glover.

Elementary Physics: Book Prize—D. S. Glover.

Elementary Construction: Book Prize—D. S. Glover.

Renaissance Architecture: Book Prize—S. F. Irwin.

Materials: Book Prize—M. D. N. Koch.

Intermediate and Advanced Construction: Book Prize—A. B. Hamilton.

Hygiene: Book Prize—James Burford.

Timber and Steel Construction: Book Prize—R. A. Duncan.

Evening School.

First Year.

Book Prize—H. Brundle.

Second Year.

"Andrew Oliver Prize," value £5 5s.—E. A. D. Tanner.

Third Year.

Book Prize—R. Braine.

Fourth Year.

First Prize: Free pass to new School of Design for one year—J. B. M. Walch.

Second Prize, value £3 3s.—R. H. Maddock.

Day School.

First Year.

Studio Prize for best work done throughout the year, value £2 10s.—O. Campbell Jones.

History Examination: Book Prize—P. M. Hill.

Construction Examination: Book Prize—W. Steer.

Freehand Studies: Book Prize—A. G. Brian.

General Progress: Book Prize—A. S. Whitburn.

Second Year.

The Association Two-year Course Certificate has been awarded to the following students:—C. J. Brandon, G. G. Clark, N. F. C. Day, F. A. Eschawzier, J. H. Hopewell, W. H. Lloyd, J. L. Murgatroyd, F. Reixa, H. Schein, G. B. Tubbs, F. R. M. Woodhouse, R. C. Blampied.

End of Session Test, value £4—G. G. Clark.

Freehand Studies: Book Prize—G. G. Clark.

Travelling Studentship, for best work done throughout the year, value £20—F. P. M. Woodhouse.

Second Prize, Studentship Competition, value £5—F. A. Eschawzier.

"Howard Colls" Travelling Studentship, specially awarded in second year by the Council, value £15 15s.—W. C. von Berg.

Third Year.

Book Prizes for best work done in the studio during the year—1, W. T. Ching; 2, D. C. L. Derry; 3, H. F. Gossling.

The Jarvis Scholarship, value £40, awarded for the best constructional sheet prepared in connection with a design subject—A. B. Hamilton.

The Day School Travelling Studentship, value £50, for best work done throughout the year—A. Stanhope Forbes.

Second Prize, Studentship Competition, value £10—Divided between James Burford and J. H. Jacob.

A.A. Travelling Studentship, value 25 guineas, specially awarded in Third Year—R. A. Duncan.

Other Prizes.

A.A. Essay Prize, value £10 10s.—A. S. G. Butler.

Banister Fletcher Entrance Scholarship to Evening School, tenable for two years, value 28 guineas—P. S. Hudson.

A.A. Entrance Scholarship to Day School, tenable for one year, value 48 guineas—F. W. Mathew (Dover College).

THE CIVIC EXHIBITION AT DUBLIN.

To criticise openly any undertaking over which the green flag waves is often a somewhat venturesome undertaking, for the green flag never patiently endures criticism, and, in fact, often confounds it with attack. In Ireland ideas count for so much and their careful and exact working out for so little that for the critic to attempt to point out any flaws in their realisation is to render himself liable for high treason.

Our present concern is with the recently-opened Civic Exhibition at Dublin, and if we cannot truthfully say that we were delighted with everything that we saw there, let us hasten to add that we cannot too highly applaud the idea that is behind the enterprise—the idea of fostering in Ireland a better sense of civic pride, a clearer notion of civic welfare.

But of the Exhibition, in fact, we must, in the first place, confess to having been misled by the title. We had interpreted the word "civic" in its common, though restricted, sense as referring to town life, and we were therefore somewhat surprised to encounter sections dealing with such matters as bee-keeping, dairy-farming, and rural housing. The object of the Exhibition is better described in a pamphlet published by the promoters—a document, by the way, defaced by some wretchedly bad and wholly unnecessary pen-and-ink sketches—which declares that it is "to show Irish life as it is; to illustrate . . . its significant recent advances . . . and to point the way toward the further solution of some of the problems of the day and of the more immediate future. The Exhibition will be comprehensive. . . . It will present civic life in both city and country, and will include some outside exhibits of special interest to Ireland during this expanding period." Such an object is indeed comprehensive, and it is unfortunate that its complete realisation should have been hindered by what appears to have been due to shortness of time, lack of funds, not very suitable buildings, and a want of taste in their adaptation.

The concern of a journal such as this is, however, chiefly with those sections of the

Fig. 5. Cathedral, Genoa: A Romanesque Portal. (*See page* 94.)

Exhibition directly connected with building matters and the arts, and, though the Public Health Section appeared to us to be extremely well organised, and, judging by the crowds that it attracts, is already doing excellent work, dealing, as it does, very largely with such matters as the care of children, to discuss it is rather beyond our province. But it is our province, on the other hand, to draw attention to an omission of quite another sort, which we think regrettable. We did not notice any section dealing with the value to civic life of commemorative sculpture and painting. The careful upbringing of children, both in regard to health, physical and mental, and to the education that fits them for the business of life, is of supreme importance to the welfare of any community. To inspire their energies by putting before their eyes great works of art illustrative of the great deeds of the men that have passed is a form of education that is too often undervalued. The type of mind that prides itself on being "practical" is only too apt to imagine that the only function of such works is to attract tourists to holiday resorts.

The Town Planning Section of the Exhibition is chiefly composed of a large collection of maps, drawings, and photographs arranged by Professor Geddes and illustrative of the history of the development of towns and of what might be called the philosophy of town planning. This collection is well known, having already been exhibited elsewhere, and is most interesting, though hardly self-explanatory to the man in the street. It is to be hoped that, as far as possible, a competent staff will be constantly available to explain this exhibit to groups of visitors, who otherwise would wander through it unedified.

In connection with this section a Summer School of Civics is about to be held at the Exhibition from July 27 to August 15, during the period of which Professor Geddes will lecture upon the History and Development of Towns. Many other subjects connected with the welfare of population and the scientific study of places of habitation will also be treated. But here again we feel bound to remark that the subject of the relationship of architecture and the fine arts to citizenship fails to find a place. Such an omission we can only say we think to be a serious mistake. And if this is the spirit in which the Exhibition has been organised we must fear greatly for the practical success of the competition for an ideal town plan for the City of Dublin, in which Lord Aberdeen is generously offering a first prize of £500. We sincerely hope when the jury of assessors, consisting of Professor Geddes, Dr. Nolen (of Cambridge, U.S.A.), and Mr. MacCarthy (the Dublin City Architect), come to make their award that no excellence in a competitor's scheme of housing, or in any other detail, will tempt them to forget that they will be dealing primarily with the arrangement, the conveniences, and the amenities of the capital city of a great people, for if they bear this in mind constantly they will be unable to overlook the importance of architecture.

The Housing Section is composed of recent Irish work, together with well-known English and foreign examples, such as the Hampstead Garden Suburb, the *Country Life* Cottage Competition, etc. The former, it must be said, stands badly in comparison with the best work on our side of the Channel, except perhaps in regard to rural cottages built under the Irish Labourers Act. These indeed are excessively plain, and, being nearly all made to exactly the same pattern, often have a rather spotty effect when seen scattered over the face of the country. On the other hand, picturesqueness of design would be quite unsuited to the bare hillsides where so many of these cottages are situated. They are also suited to the needs of their inhabitants, and it is notorious that they have already effected an improvement in the standard of living.

But of the urban housing too often it happens that long rows are built, even to the number of thirty-one, in an unbroken line, as at Lurgan, all to exactly the same design, and that not too good. Such a packing together of poor humanity may be necessary in a large city, but in a small town ought to have been avoided. It may shelter a man and his family well enough from the inclemency of the weather, but it will never encourage him to take joy and pride in the dwelling that he has to regard as his home. Thus the elevations are nearly always barren of architectural thought, and in many cases the planning is bad. In one housing scheme, for instance, we noticed that the living-rooms were only 9 ft. 4½ in. wide (and less where the chimney-breasts projected) by 19 ft. long—a very bad shape. Of course, there were many plans much better than this; but we cannot recollect having seen any that were strikingly good. Yet all this is not so hopeless as it appears at first sight. The new Irish housing, indifferently good though it may be, is yet a vast improvement upon the hovels which it replaces. Too rapid a progress often defeats its own end: and if the Irish housing now shown in Dublin is not good, it can be regarded as at least promising, provided that the public boards which promote such schemes will not pretend to be satisfied with their present achievements, but will show a determination to find out what is best and most up to date and to have that only. We have heard again and again of the planning of housing schemes, especially rural ones, being put into the hands of self-styled "civil engineers"—men innocent alike of the science of the engineer or the art of the architect. These indeed often do their best so far as their want of education will allow them. But to come back to what we said at the outset of this review, there is too great a tendency in Ireland to be satisfied with a mere idea, even though it may all but have failed through careless or incompetent working out. Neither town planning nor housing will succeed in Ireland unless the Irish people are determined to get the best advice and to carry it out in the best way.

We hope that the Civic Exhibition, in spite of its own shortcomings, will not fail to point the way to better things, and we heartily wish it all success.

ROYAL SANITARY INSTITUTE CONGRESS, BLACKPOOL*:

ENGINEERING AND ARCHITECTURE.

THE second sitting of this section was held on July 10, under the chairmanship of Mr. Walter Cave, F.R.I.B.A.

Outfall Sewer Construction.

Mr. J. Munce (Belfast) described the works in progress at Belfast for taking the sewage of the City about a mile into deep water. At the present time the sewage is conveyed in a wooden double trough, one mile long under the slob with its outlet in deep water. This chute was constructed some years ago to meet the opposition of landowners when the Corporation were before Parliament for powers to construct a shorter outfall; and it has not proved very satisfactory. Now it is proposed to carry the sewage in steel pipes. Mr. Munce referred to the difficulties experienced in construction owing to the existence of alluvial deposits known locally as "sleetch," which is a material which when dry crumbles like fine sand, with a little moisture swells and becomes like a soapy clay; and with a quantity of water has the consistency of soft dough.

Mr. J. S. Brodie (Blackpool) remarked that when in Belfast he had examined the wooden chute, and a more unengineering proposal he had never come across. It was an illustration of the futility of panic decisions before a Committee of the House of Commons. He thought that the comparatively small rise and fall of the tide at Belfast was probably a disadvantage in carrying out the work. At Blackpool they had a rise of 32 ft., and when they were constructing the promenade they were able by organising their forces to get a good spell of work in at low tide, and the whole of the front was put in without a single cofferdam.

Mr. Munce said that as a matter of fact Sir James Baxalgette and Sir Frederick Bramwell settled the wooden chute in a few minutes.

Town Planning and Industrial Towns.

Mr. F. W. Platt (Chief Building Inspector, Salford) submitted a paper on "Town Planning and Industrial Towns." He traced the old-time *laissez-faire* policy in town planning which had resulted in dull uniformity in miles of streets and small and sunless bed and living rooms, and referred to the steps which had led to the passing of the Housing and Town Planning Act of 1909. Discussing under what conditions town planning could be most economically applied, he said a brief classification of our towns might be made under the following heads:—(1) Cities of old standing, partly industrial; (2) largest cities, industrial and commercial; (3) municipal and county boroughs, more industrial than commercial; (4) municipal boroughs and urban districts, entirely industrial. In the first three in this list the problems to be solved were more similar in character than in the fourth. The fourth class was probably an example of a modern industrial town. Doubtless it had developed in a sporadic way. Originally it was a group of villages dotted upon the countryside, all connected with one another by roads more or less narrow. The inhabitants depended for their existence upon their skill in a particular industry. As the industry increased in volume buildings were erected alongside the roads connecting the various villages. No ordered plan of development was prepared. A community of interest, however, existed, which, actuated with motives of self-preservation, made application for a charter of incorporation, and thus a town was formed. Yet such towns presented better opportunities of improving their conditions at less financial cost than did the larger towns. Their geographical position in relation to the undeveloped areas was an advantage in the future planning of the town, and it was rare to find in a town formed as described that the density of population was great over a considerable portion of its area. Let it be remembered that a town-planning scheme might be made in respect of (1) land in course of development or likely to be used for building purposes; (2) land so situated, in respect of land likely to be used for building purposes, etc., that it ought to be included in a town-planning scheme made in respect of such before-mentioned land, *i.e.*, land already built upon but adjoining vacant land; (3) land upon which it was necessary to carry out works to complete a scheme made in respect of lands of which items 1 and 2 formed parts; and that the general objects of town-planning schemes were to provide proper sanitary conditions, amenity, and convenience in the laying out of lands.

Dealing with the preparation of a *primâ facie* case for the Local Government Board, the author said a large scale map of the district as now existing should first be examined and afterwards compared with old maps. The sequence of the growth of the town could be followed by these means and the situation of the vacant land disclosed. An opinion based upon the foregoing examination should be formed whether such land was "land," etc., within the meaning of Conditions 1, 2, or 3 on page 162. When forming this opinion it was important to note that it was the situation and not the size of each plot which was the governing feature. An acquaintance with sect. 54 (7), Housing and Town Planning Act, would also be of much assistance at this stage. Should it be found that the bulk came under Condition 1, namely, "Land in course of development," etc., it ought not to be difficult to prove that the land adjoining it should be dealt with under Condition 2. Condition 3 was a necessary complement of the preceding conditions. All that remained then was to show that the "general objects" of a town-planning scheme were fulfilled, and (subject to certain procedure rules being followed) the *primâ facie* case was made. The problem of the industrial town did not end when the dense areas had been opened out by arterial roads. The standard of limitation of the number of houses to the acre must receive attention. A minimum "population density" was of the essence of this subject. The skilled artisan of the town represented about 60 per cent. of the total population. He was willing to take advantage of good conditions of housing, and responded to such conditions more readily than the careless, inefficient, and ignorant. These facts should be considered when determining the standard of limitation, and the standard should be that which would enable this type of worker to obtain the fullest degree of health in his dwelling. The actual number of houses depended upon situation and the connection of the area with other dwellings. Fifteen had been considered a reasonable maximum for industrial centres, and whether the "land unit" to which it applied be one or more acres, provision should be made that under no circumstances would it be possible to crowd a large proportion of the houses on one part of the unit and leave the remaining land open for other prospective use.

Mr. Brodie (Blackpool) suggested that as they had with them Mr. Collins, of Norwich, who had been appointed a member of the Departmental Committee which the Government had formed in connection with the new building

* Continued from page 72.

by-laws, it would be well if they gave some idea of what they wanted. Mr. Platt seemed to think a good deal could be done in the way of town planning under by-laws, but many of them were driven to go to Parliament with Private Bills because the Local Government Board was so very timid in granting to the local authorities strong by-laws. He trusted that the Departmental Committee would put some little backbone into the Local Government Board in regard to entrusting local authorities with stronger by-laws in respect of building operations. He did not mean that they should be by-laws to prevent the builder carrying out good buildings, but something which would enable them to get the builder to do his duty from the sanitary point of view.

Mr. Lacey (Borough Surveyor, Oswestry) remarked that there were many small towns where the growth was very slow and where the preparation of a town-planning scheme was almost out of the question. If there were by-laws framed more on town-planning lines it would be a great advantage. In the by-laws now such matters as the lay-out of streets were very indefinite, and they wanted some limitation of the number of houses to the acre so that the horrible rows of house with practically no break between them could be avoided. They might get power in the by-laws to require that streets should be laid out on town-planning lines.

Mr. Jenkin (Finchley) said that in his area the Hampstead Garden City built on 600 acres, and they made arrangements with the company whereby they agreed to do certain things in the way of limiting the number of houses to the acre; the provision of open spaces, and so on. His authority then went to the Local Government Board and asked to be allowed to waive certain by-laws in regard to the Garden City, and were told by the Board that if they altered their by-laws they ought to alter them for the whole district, because the Board said they would be prejudicing builders in other portions of their district if they did not. It looked as if two departments of the Local Government Board were pulling in different directions.

Mr. Alderman Lloyd (Bristol) referred to the importance of town planning to the great cities, and described what he was trying to get done in Bristol in the way of fixing the lines of communication. They required about a thousand houses a year to keep pace with the needs of the population. The roads of access into the city had, of course, been laid down by custom, and they were trying to lay down lines for other roads to divert traffic from the congested parts.

Mr. Watkins (Pontypool) hoped the Departmental Committee would not think that the local authorities considered the present by-laws required very drastic amendment. He strongly urged that if by-laws were laid down they ought to be adhered to in every case.

Mr. Willis (Chiswick) considered that the building line was one of the most important provisions which could be obtained under town planning. If the local authority could only obtain that one power of fixing the building line in all future streets, then the Act would have been a success.

Mr. Munce (Belfast) said that year after year they talked about by-laws, and he did not see why the Institute should not appoint a Committee to draw up a set of model by-laws. If Alderman Lloyd tried to direct traffic from the main lines he would find he was doing a most unpopular thing, as the tradesmen strongly objected to it.

White-Lead and its Disuse for Painting.

Sir Henry Tanner, F.R.I.B.A., opened a discussion on this subject by a paper, in which he said that the danger of white-lead, owing to its poisonous qualities, to the health of the workpeople employed, both in its manufacture and use, had long been under consideration. It had been shown that painters suffered considerably from lead poisoning, but as the Factory Acts did not apply to house painting, only to work done in factories, there were no accurate returns in regard to them, although many cases were reported. Consequently the question of finding some substitute of a non-poisonous character had been discussed for many years. In France, so long as 130 years ago, zinc oxide was discovered and endeavours made to bring it into use, and also because it was found that it retained its colour under the same conditions which caused white-lead to discolour. The usual objections, that zinc oxide dried with difficulty and was deficient in covering power, were made, and, although zinc oxide was adopted in 1782 for internal painting in the French Navy, comparatively little progress was made. The subject was revived from time to time, particularly about 1849, when the Minister of Public Works issued a decree prohibiting the use of white-lead within his jurisdiction, and this was followed by a Report to the Prefect of the Seine, in 1850, that zinc oxide was more economical, more durable than white-lead, and that there was ground for directing the city architects to adopt it.

In 1851 a circular was issued by the Minister of the Interior to the same effect, and in 1853 a Commission was appointed to consider whether prohibition should be absolute, both as to the manufacture and use of white-lead. This Commission recommended that as the substitution of zinc oxide for white-lead would operate naturally, because of its advantages, it was therefore unnecessary to prohibit either the manufacture or use of white lead. However, prejudice prevented this expectation being realised, and the controversy was revived in 1900 and continued for some years.

In 1901 a Committee of Public Health reported that zinc oxide might be substituted for white-lead without greater difficulty in regard to labour or cost, and that, although improvements had been made in the manufacture of white-lead, it still remained the cause of much unhealthiness, and further expressed astonishment that after the lapse of so many years since its first employment in France the use of zinc oxide as a substitute had not been effected. At the same time, the opinion was expressed that the manufacture and sale of white-lead should not be prohibited, as the Committee were not absolutely sure that it could be completely dispensed with, as it occurred in colours such as chromates. The conclusions arrived at were that it was altogether desirable to substitute zinc oxide, from a health point of view, and it was possible to do so in the majority of cases. It was not, however, till July, 1909, that an Act was passed providing that white-lead might not be used in any painting operation, either on the exterior or interior of buildings, after the expiration of five years from the date of the Act, and this date was close at hand.

In Germany regulations were issued in 1906 laying down conditions under which painting, etc., with white-lead were to be conducted. Austria and Belgium followed in 1909 and 1910. Dry rubbing and pumicing were forbidden and cleanliness insisted upon.

In the Netherlands a Commission was appointed to inquire whether white-lead could be replaced by other paints, and reported in October, 1909. The conclusions arrived at were that zinc oxide had been used by expert painters in that country for many years, and was better able to withstand action of sulphuretted hydrogen gas than white-lead, but not so well able to withstand vapours of sulphurous acids. That it was well able to withstand the action of the open air for five years as well as lead on iron, the first coat being of lead oxide, but that it was inferior to lead where exposed to accumulations of water. That it covered equally well and was not dearer. That lithopone could not replace lead, and that for works above water first coats of oxide of iron had proved to be quite as good as red oxide of lead. The Commission arrived at the above conclusion after a very extensive series of inquiries and experiments under a variety of conditions.

In 1901 the Home Office drew the attention of the Commissioners of Works to the circular issued on June 1, 1901, by the Minister of Public Works to the Prefects pointing out also the extreme danger of lead poisoning that house painters were exposed to by the use of lead in paint. He expressed the opinion at the time that to abandon white-lead and substitute zinc oxide would mean increased expense, and that the latter was not to be recommended for outside work, which was the common opinion at the time. He, however, arranged, with the concurrence of the Commissioners, that experiments should be made with all kinds of paints, both as purchased ready for use and mixed from raw materials, under the supervision of competent persons. They were all analysed by the Government analyst, covering power under similar conditions and cost being carefully noted. The weathering capacity was observed at intervals.

There had appeared in 1899 several articles on the weathering capacity of various paints, etc., on iron plates, the results being tabulated as follows:—

	Pounds of rust per yard.
Red lead	none
Zinc white	trace
White-lead	·053
Oxide (iron)	·083

These results led him to modify the views that he had previously expressed as to cost and weathering capacity.

More extensive experiments followed, but opinions differed in regard to weathering capacity, although for internal work zinc oxide was regarded as perfectly satisfactory. The experiments, however, showed that there were differences of procedure, and that it would be necessary, in order to ensure accuracy in results, to concentrate the matter in the control of one individual, and this was done. White-lead had, prior to about the year 1900, been the base of most good commercial paints, either alone or in combination with other pigments, and was valued as a paint base as giving an opaque hard-drying, yet elastic, protective film; but its defects, apart from poisoning many of its users, were its liability to discoloration and its "chalking" in chemical and seaside atmospheres.

Various substitutes had been introduced; some cheaper, such as barium sulphate, lithopone, and others, but zinc oxide is now the only serious competitor. It only came into use in this country towards the end of the last century, but during the interval that use has extended enormously. The ordinary painter had been brought up in the use of white-lead, and was usually strongly prejudiced against any non-poisonous paint being substituted, although it was to his own advantage from a health point of view. The workman was not to be trusted to mix paint having a zinc base, and was prone to deal with it in the same way as he was accustomed to in the case of white-lead, consequently there were frequent failures from slow drying and lack of opacity, the work requiring a greater number of coats.

Zinc oxide was a fine white easily-worked paint base, non-poisonous, and fairly permanent in colour, and had been found particularly valuable in chemical and seaside atmospheres. Consequently a more careful and systematic study was made of the mixing of paints having a zinc oxide base. Refined boiled oil was used with borate of manganese as a drier, paints so composed drying quite well. It was found that paints could be used freely when containing as much as 60 to 70 per cent. of zinc oxide, and that when so used they were of equal opacity to the usual white-lead paints. Moreover, that while three coats of paint had been generally given on bare plaster walls, similar work had been successfully carried out with two coats of zinc paint when specially prepared. For undercoating the paint best adapted had to be materially different from the finishing coat.

As the result of experiments certain proportions of the constituents of paints for undercoating and finishing in white, brown, and green were arrived at, and in 1906 a number of buildings were painted with paint so mixed, and careful observations were made and records kept of the various makes and composition. The proportions, however, have been varied from time to time and now stand as in table on next page.

Chromium oxide might be used for greens, and lead chromes might be replaced with zinc chromes and anilines if permanent; the driers should be liquid, and the paint should dry in from ten to twelve hours, and fast to friction and weather; the undercoats should be semi-flat and the finishing glossy, drying with a hard, yet elastic, film.

Experience had shown that zinc oxide, as a paint base, was a good substitute for white-lead for ordinary purposes in white and light shades. In colour and wear it had stood well, internally and also externally, particularly when used on old lead paint. Trouble had been experienced with scaling in some cases, chiefly on hard or damp woods, most pronounced when priming has been of zinc oxide, and probably aggravated by the use in excessive quantity of driers, to make a quick drying paint at the expense of toughness and permanence. Experiments were being made by which it was hoped that this defect would be overcome, but the importance of employing a minimum quantity of driers, and that of a flexible character, could not be overrated.

Difficulty had also arisen with dark colours, such as green and brown. Such paints could

be easily produced which would be quite satisfactory for a time, but after a winter's exposure become soft and were easily rubbed up. Chemists and paint manufacturers were consulted, but without effect for some time. It was, however, found that if a small quantity of litharge, or if the zinc oxide made by the direct process, from the ore, which had 5 per cent. to 7 per cent. of combined lead salts, were used considerable improvement was effected, acting as a toughener, and from which little harm could arise to the workers. It was therefore thought desirable to allow lead in mixed paints to the extent of, say, 5 per cent. generally, and 11 per cent. in greens for the present.

Description.	Zinc Oxide.	Silica or Barium Sulphate.	Lead Carbonate or Sulphate.	Lead Oxides.	Iron Oxides.	Zinc Sulphide.	Floated Silica.	Refined B. Oil Copal Varnish and Driers.	B. American Turpentine.
Wood priming	25·0	17·0	5·0	...	...	8·0	10·0	25·0	10·0
Ivory } Undercoating	50·0	15·0	5·0	...	...	Lead Compds		15·0	15·0
White } Finishing	45·0	10·0	5·0	...	...		Prus. blue	34·0	6·0
Medium } Undercoating	10·0	10·0	2·0	3·0	22·0			38·0	15·0
Brown } Finishing	2·0	5·0	2·0	3·0	22·0			61·0	6·0
Medium } Undercoating	15·0	15·0	...	3·0	7·0	6·0	2·0	37·0	15·0
Green } Finishing	3·0	8·0	...	3·0	12·0	8·0	2·0	58·0	6·0

Many paint-makers in this country and America had frankly abandoned the use of pure zinc paint, adopting proportions up to an equal amount of lead, zinc, and barium sulphate. While one large railway had adopted zinc paints another had given them up, and in paints prepared abroad up to 7 per cent. of lead was retained. While the difficulties of adopting zinc oxide to the exclusion of lead are common, there was no doubt that most of them were being overcome, and the remainder were in a fair way to solution.

It was important that the pigment should be very finely ground, and not varied in size, so that when spread the particles were evenly covered by the oil or varnish mediums. It was very desirable that there should be some standard of fineness, and until this could be laid down no stipulation could be made in the specification. The character of the medium was of equal or greater importance, and refined boiled linseed oil was without doubt one of the best mediums for zinc oxide paint, both because of its paleness and superior drying qualities. It was satisfactory for undercoats, but oils used alone gave rise to a ropey, uneven surface as a finishing medium. This defect was effectively overcome by the addition of a certain proportion of good oil copal varnish, which also improved the appearance and protective power of the paint. The proportion of varnish might vary considerably according to quality and purpose of the paint, but for zinc oxide one of varnish to three of oil, and for iron oxide and other dark paints a mixture of one of varnish to two of oil appeared to give good and economical results. Chinese Tung oil was successfully used in America, and to some extent in this country, and when properly treated it gave a hard yet elastic film, and might probably to some extent displace linseed oil.

Difficulty still remained in discovering a paint which would withstand humidity, such as that experienced in glasshouses used for tropical plants and other damp conditions. These difficulties were, however, common to both lead and zinc paints, and appeared to depend on the medium rather than the pigment, so this aspect of the case hardly affected the question of lead *versus* zinc paints.

This summarised briefly the position to-day as regarded the abandonment of lead as a paint base, and, although a small quantity seemed desirable or necessary, it was possible that in course of time its use might not be needed at all. The mixing of paint, however, should not be left to the ordinary house painter, but the paint should be obtained ready mixed from manufacturers skilled in using the proper proportions regularly of the various materials and who had efficient supervision and machinery for perfect grinding and mixing, and who could produce the paint at very moderate prices, by which means the cost of painting was no greater than before. It would be obvious that there was now no reason why zinc oxide should not practically take the place of white-lead for general purposes, and this view was borne out by papers which had been read before the Paint and Varnish Society and the discussions which had occurred thereon.

The results of the earlier experiments which were made appeared to warrant the general use of zinc oxide paints in preference to those having a white-lead base, and in 1907 a general instruction was issued to the officers of the Commissioners of Works to use such paints to the exclusion of white-lead, except for iron or steel, where the first coat is usually orange-lead or orange-lead and graphite combined. Gloss paints had been used generally and enamel for the better-class work internally. Nothing had occurred since the instruction was given to throw any doubt upon the policy then adopted. Numerous paint manufacturers did everything in their power to assist in the solution of the difficulties which arose, and to avoid defects which occurred here and there, and it might be claimed by the Commissioners that their efforts had not only been of benefit to the workmen employed in executing painting works for the Department, but in generally directing attention to the matter and influencing manufacturers, who were seriously concerned under the Employers' Liability Act, thereby indirectly extending the use of non-poisonous paint. It was with the object of extending the use of non-poisonous paints that he had ventured to draw attention to these experiences.

Mr. Noel Heaton (London) said he disagreed with almost every conclusion in the paper. As to the general conclusion expressed towards the end to the effect that it was obvious there was now no reason why zinc oxide should not take the place of white-lead for general purposes, as a result of more than twenty years' practical experience in the scientific and technical investigation of paint problems, he believed there were many sound technical reasons for stating that zinc oxide was by no means an efficient substitute for white-lead, and he knew many cases in which its use had resulted in disastrous failure. Sir Henry Tanner had stated that the view he had expressed was borne out by papers read before the Paint and Varnish Society. As one who was largely concerned in the foundation of that Society, and who knew everything which had gone on, he (the speaker) did not think Sir Henry Tanner's conclusion was entirely justified. There had been strong discussions on the point and the question was a very burning one among those connected with the paint industry, but it was not quite accurate to say that the Society on the whole was favourable to the disuse of white-lead. Some of the members would like to see it abolished, but as a rule they were those who were interested in zinc oxides. The only fair way was to go to the practical user of the material—the master decorator—and hear his views, and he thought they would find that the vast majority of such people were prepared to agree to the conclusion that the use of white-lead could not be abolished. That was not due to prejudice, as he knew many well-standing decorators and master painters who had approached the subject with quite an open mind and who had taken up the idea of replacing white-lead with substitutes with enthusiasm. They had introduced those substitutes into their work, but as a rule they had been forced to give them up. He could tell them of many decorators who had come to the conclusion that white-lead was very necessary in their work, and, although some might call it prejudice, to him (the speaker) it was remarkably like common sense. While zinc oxide had many uses, there were sound reasons for thinking that it never could become a really satisfactory substitute for white-lead. The burning question of lead poisoning which was always being dragged to the front interested them as a Sanitary Institute, and he must say that he did not think the paper quite sufficiently took into account modern investigations into this subject. In his view the dangers of lead poisoning had been greatly exaggerated. Medical and scientific investigations had shown that its dangers were very largely the result of carelessness and ignorance, and that the dangers had been very largely reduced as the result of simple precautions. As an instance of that they had the fact that in 1900 the number of cases of poisoning in white-lead works, which employed about 6,000 men, was something over 250 in the year. In 1912, as the result of just taking simple precautions and exercising care and cleanliness, the number had fallen to twenty-three, and the numbers were still falling. This question of lead poisoning had been made a bogy, and it had only been necessary for the painter to catch a cold for plumbism to be diagnosed. They talked glibly enough of doing away with white-lead and using non-poisonous paints, but it had been proved that some of the substitutes were quite as harmful as white-lead itself. It was now becoming recognised that they might do away with white-lead, and yet not do away with the danger of poisoning from the use of paint. His feeling was that, whilst they should spare no effort to improve the sanitary conditions of their workers and painters, they should pause before they committed themselves to a policy which might not have the effect they desired. He thought the line they ought to take more was to educate the painter and the user of white-lead, for if used properly he was convinced that the risk of poisoning might be reduced to a very low point indeed.

Mr. Willis (Chiswick) considered they were greatly indebted to Sir Henry Tanner for his investigations. Personally he still preferred to use white-lead. He found zinc oxide answer well for interior work, but he had not found it satisfactory for outside work, although he had tried the paints of several manufacturers. He would like to know the effect of ammonia on zinc oxide, for up to the present he had found no paint which satisfactorily stood ammonia fumes in a damp atmosphere. In the underground conveniences of London he had found that no paint in contact with an iron girder stood for more than a year or two.

Sir Henry Tanner said he was not concerned with the opinions of medical officers, and if he found he was able to make paints which suited his requirements he felt he had done his part. He did not speak of the prejudice of the master painters, but of the workmen. Everyone knew that workmen were apt to stand up for what they had always done rather than for anything new, and it was for that reason they decided that no more paint should be mixed by the workmen on the job. They always stipulated that the paints used should be bought from some manufacturer who they knew mixed them in accordance with their requirements. So far as external painting was concerned, they had had no difficulty in the use of zinc oxide, and in fact he was considering whether he should extend the period of four years for outside painting to five years. He had had no experience of painting ironwork in underground conveniences.

[*** This report will be concluded in our next issue.—ED.]

COMPETITION NEWS.

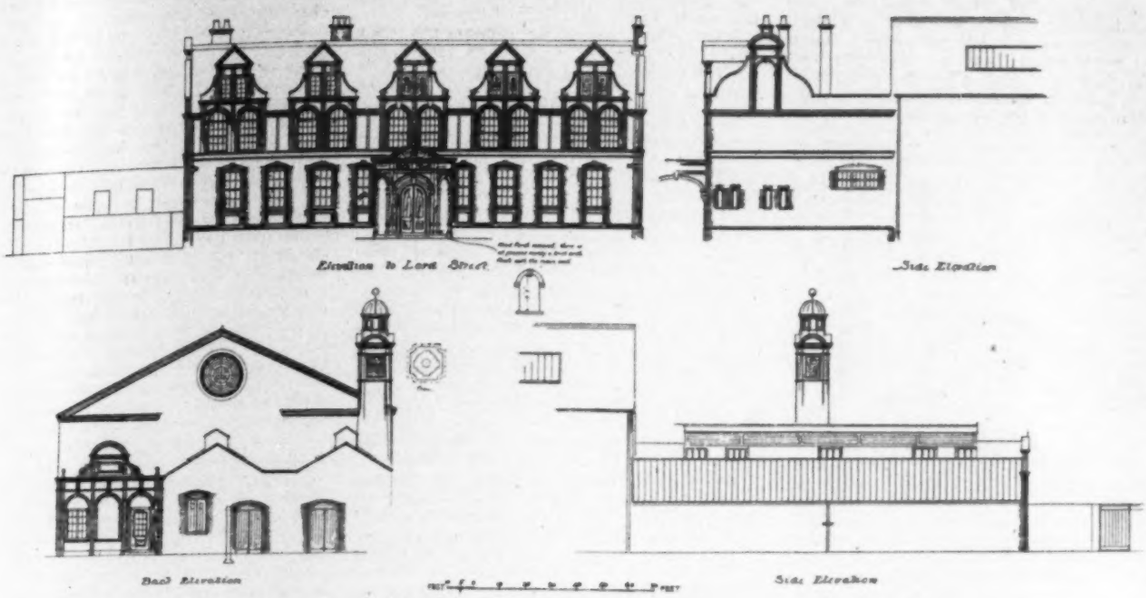
It must be understood that the following is printed as news, and not as an advertisement; and that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

The list of current Competitions is printed on page 114.

Southport Proposed Technical Schools.

The competition will be assessed by Mr. Paul Waterhouse, on whose advice the premiums of £75, £50, and £25 will be awarded, and the architect placed first will be appointed to carry out the work on the customary terms. Drawings are to be sent in on October 14 next.

The Corporation owns the whole of the land coloured on the block plan, including the portions hatched with diagonal and vertical shading. The portion hatched vertically at the extreme south-east of the property is still held under lease by the West Lancashire Territorial Association, and is not available for the present scheme. The portion hatched diagonally is held on lease by Messrs. Kiddie & Co. (except the cottage and garden), and is reserved by the Corporation for future purposes. Each competitor is desired to indicate a future



Glaciarium, Lord-Street, Southport.

extension of his building scheme on this portion of the land, and should design his corridors, etc., with that extension in view, but it is suggested that in the ultimate scheme a road, at least 10 ft. wide, should be formed along the south-west boundary of the whole property, thus giving through communication (for heavy goods to the School) from the approach road out of Hoghton-street to the Lord-street frontage, but, as Messrs. Kiddie & Co.'s lease does not expire for several years, it will be necessary to provide, temporarily or permanently, an approach for goods by means of the road on the north-east side of the present front buildings. The owners of Brunswick Villa and Crown House have rights of light over the land of the Corporation with respect to their existing windows. The houses in Manchester-road have no such rights.

The whole of the land coloured with the plain pink wash, including the site of the Glaciarium buildings, is available for the purposes of the present scheme, except that the ultimate frontage of the new buildings towards Lord-street is not to be in advance of the dotted line (marked "proposed frontage line") shown upon the ground plan. The figures in circles on the plan are levels above Ordnance datum.

The Corporation have voted £16,000 "for the rebuilding of the back portion of the Glaciarium premises, and for adapting the front building." It is ultimately intended to rebuild the front building, and competitors should submit drawings showing:—

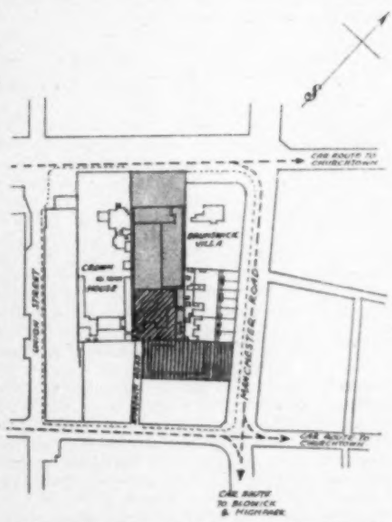
A preliminary arrangement, with the front building remaining (hereinafter called Scheme "A").

A final arrangement, with the front building rebuilt (hereinafter called Scheme "B").

An important consideration is to have a good final arrangement (Scheme "B"), and, if this can be designed so as temporarily to use the front building in a satisfactory manner, such a design will have preference.

If, however, an architect considers it inconsistent with the best arrangement to make his Scheme "A" an instalment of his Scheme "B," he is at liberty to submit a Scheme "B" unrelated to his Scheme "A." In such a case, the Schemes "A" and "B" will be virtually alternatives to one another.

The final scheme in any case must provide, in addition to the accommodation shown on



Glaciarium Site, Lord-Street, Southport.

the schedule, a large lofty central hall, with a floor area of 2,800 super ft., and also space for additional accommodation, if required, at some future time.

The approximate number of scholars to be accommodated is, viz.:—Male, 250; female, 250. The requirements of the Board of Education as regards cloakroom and sanitary accommodation for each sex must be carefully adhered to.

Schedule of accommodation required:—

Administrative.

Examination Hall.—The large room on the first floor of the old front building is to serve this purpose in Scheme "A," and to be replaced in Scheme "B" by a lofty hall with side galleries (floor area 2,800 super. ft.).

Schools Registration Office, 200 super. ft.; Organising Master's Office, 300 super. ft.; Book Store, 100 super. ft. Adjoining one another and convenient to Education Offices.

Study, Library, and Committee-room—500 super. ft.

Staff-room (men)—250 super. ft.

Staff-room (women)—200 super. ft.—Convenient to Art Department.

Caretaker's-room and Store.—Convenient to main entrances. With sink and hot water laid on.

Cloakrooms and Lavatories (men), 700 super. ft.; ditto (women), 700 super. ft. The whole of the lavatories may be concentrated in sanitary blocks, or may be distributed according to the position of the departments. Lavatory accommodation is required for office principals (men), clerks (men and women), schools' staff (men and women), and students (men and women). These may all be distinct or grouped. Accommodation for women should be convenient to the Art Department. All lavatories to be lined the full height with glazed bricks or tiles with rounded angles. The floors to be finished in terrazzo. All fixtures to be the best fireclay products.

Large electric service Lift.

Heating Chamber.—With separate hot-water apparatus. Accommodation for electric light, gas and water meters, etc.

Fuel Stores.

Cycle Shed.—Storage for thirty bicycles.

Service Rooms.—Small cleaners' stores in convenient positions on each floor. Plugs to be provided in suitable positions throughout the building for vacuum cleaners.

Space for Lockers and Exhibition Cases.—Convenient to the Art Department and Drawing Offices.

Education Offices.

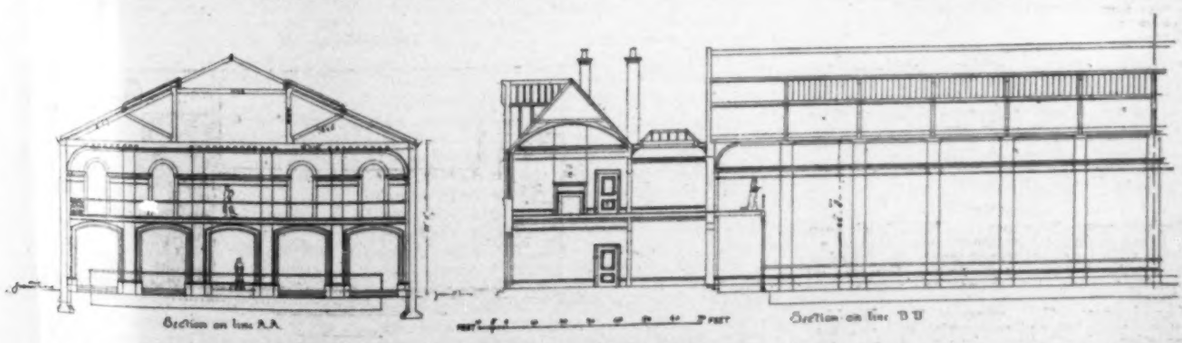
Public Inquiry Hall and Waiting-room—200 super. ft.

General Office—850 super. ft. Portion screened off for Assistant Education Secretary.

Education Secretary's Room—300 super. ft.

School Attendance Officers' Room—270 super. ft.

Store-room—150 super. ft.



Glaciarium, Lord-Street, Southport.

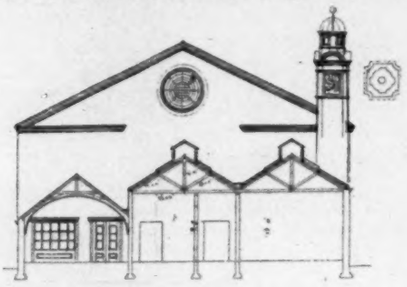
Engineering.

Heat and Motor Engineering Laboratory—875 super. ft. Direct access for cars to enter through large doors. Hoisting blocks required slung from ceiling runners. Connections for electric power driving in suitable positions. A testing pit to be provided about 9 ft. by 7 ft. by 6 ft. deep with movable cover level with floor.

Engineering and Metal Workshop—675 super. ft. Large external doors. Hoisting blocks required slung from ceiling runners. Connections for electric power driving in suitable positions. A forge must be provided.

Electrical Engineering Laboratory—875 super. ft. Hoisting blocks required slung from ceiling runners. Connections for electric power driving in suitable positions.

Classroom (Technology)—500 super. ft. With gallery rostrum, and demonstration table, with



Glaciarium, Lord-Street, Southport.

gas and water laid on. An accumulator-room to be formed beneath the gallery to serve the Electrical Engineering Laboratory, and with connection to demonstration table. Blackboards, map rails, and store cupboards to be provided.

Drawing Office—1,125 super. ft. Adjoining Art Rooms. With northerly or top light.

Stores.

Building.

Woodworking Workshop—1,250 super ft. Connections for electric power driving in suitable positions. Gas supply to heaters.

Plumbing and Electric Wiring Workshop—750 super. ft. Gas and oxygen service required to benches.

Drawing Office—750 super. ft. Adjoining Art Rooms. With northerly or top light.

Stores.

Science.

Natural Science Lecture-room and Laboratory—900 super. ft. With rostrum and demonstration table, with gas and water laid on. The room to be adapted for the display of slides in the electric lantern, with darkening shutters to windows. Blackboards, store cupboards, and map rails to be provided, and electric plugs to working benches.

Chemistry Laboratory—1,125 super. ft. Working benches to be provided for students, with gas and water and electric plugs. Also some fume closets.

Physics and Mechanics Laboratory—750 super. ft. Working benches to be provided for students, with gas laid on, electric plugs, and a few sinks. Pulleys required, slung from ceiling beams.

Balance-room—180 super. ft. Adjoining Chemstry Laboratory and near Physics Laboratory.

Dark-room for Photometry—200 super. ft. Ditto, ditto. To be properly ventilated and fitted with gas and electric light. Two cubicles to be formed for photographic developing.

Chemistry and Lecture Theatre—750 super. ft. With raised gallery. With rostrum apd demonstration table, fitted with gas and water supply, blackboards, map rails, and store cupboards. Darkening shutters to be fitted to windows.

Physics and Mechanics' Lecture Theatre—500 super. ft. Ditto, ditto. This room must be placed so that sunlight can be admitted when required.

Preparation-room—180 super. ft. To be placed so as to communicate with either Lecture Theatre. Gas and water to be laid on. A fume closet to be placed between this room and Chemistry Lecture Theatre.

Cinema Chamber.—To be placed so as to be available for use in connection with either Lecture Theatre. To be of approved fire-resisting construction properly ventilated, and erected in accordance with the Cinematograph Act, 1909, and the Regulations of the Home Office relative to the same.

Stores.

Commercial.

Classroom, 600 super. ft.; ditto, 400 super. ft.; ditto, 400 super. ft.; ditto, 400 super. ft. With left-hand light if possible. Each classroom to have rostrum, blackboards, map rails, and store cupboards. One room to be adapted for the display of slides in the electric lantern, with darkening shutters to windows.

Typewriting Classroom—500 super. ft. Near Organising Master's Room.

Domestic.

Cookery-room—800 super. ft. With brick oven for bread-baking confectionery etc. Range required, with large boiler and hot-water cylinder, sinks, with hot and cold water. Screened-off space for teacher. Gas connections required for cookers.

Laundry-room—600 super. ft. Washing troughs, with hot and cold water laid on. Gas connections for boilers, ironing stoves, and drying closets.

Needlework and Millinery Work—1,000 super. ft. Cupboards to be provided. Also gas connections for ironing stoves.

Set of Three Rooms for Housewifery, each 225 super. ft.—675 super. ft. *En suite*; but each to have a fireplace and to open on to corridor. One will require a kitchen range and sink.

Stores.

School of Art

To be if possible all on one floor.

Head Art Master's Room—350 super. ft. In an easily accessible position, with inquiry window.

Second Art Master's Room—250 super. ft. Northr light.

Students' Common-room and Library—350 super. ft. Adjoining Design-room.

Elementary Art-room, 550 super. ft.; Lecture and Design-room 500 super. ft. With rostrum, demonstration table, blackboards, map rails, and cupboards.

Antique Studio—600 super. ft. North light. Window sills 7 ft. from ground, and roof lights continuous and inclined at an angle of 70 deg. with horizontal.

Cast Store—200 super. ft. Adjoining Antique Studio, with rails in floor for running out large casts through sliding doors.

Modelling Studio—500 super. ft. Lighting similar to Antique Studio. Hot water to be laid on to sink.

Casting-room—150 super. ft—Communicating with Antique Studio by sliding door. Sink to be provided.

Life Drawing Studio—650 super. ft. Lighting similar to Antique Studio. The throne will require specially heating. A small portion to be screened off as a dressing-room.

Wood-carving and Crafts Studio—400 super. ft.

Embroidery, Etching, and Enamelling Studio—300 super. ft. With hot water laid on to sinks, and with furnaces.

Painters' and Decorators' Room—700 super. ft. Top lighted. All walls to be left blank for painting upon. Provision to be made for paint storage, cleaning brushes, and boiling water to sink.

Store, Conservatory, and Cages.—Provision to be made for keeping birds and small animals. Conservatory may be on roof.

Drawings are to be made to a scale of 16 ft. to 1 in. and are to include plans of all floors; two sections and four elevations. The cost will be an important element in determining the competition.

BOOKS.

Early Renaissance Architecture in England. By J. A. GOTCH. Second Edition. (London: B. T. Batsford. 1914. 15s.)

MR. GOTCH'S deservedly popular book has entered on this second lease of life thirteen years after the publication of the first edition in 1901. This fact is in itself the best recommendation an architectural work can have, and few attain such a measure of success. Partly because of the constant change in professional taste, through which one style is blessed by one generation and cursed by the next, and partly because of the very rapid progress in methods of photography and reproduction, very few architectural books have a long life. But the increasing number of students sitting for the R.I.B.A. examinations on all important periods of architecture, the growing tendency of architects to reproduce the work of any style as required, and, most of all, we think, the new passion among the general public to know something of buildings, secular as well as ecclesiastical, have combined to produce a more steady demand for a book of this character.

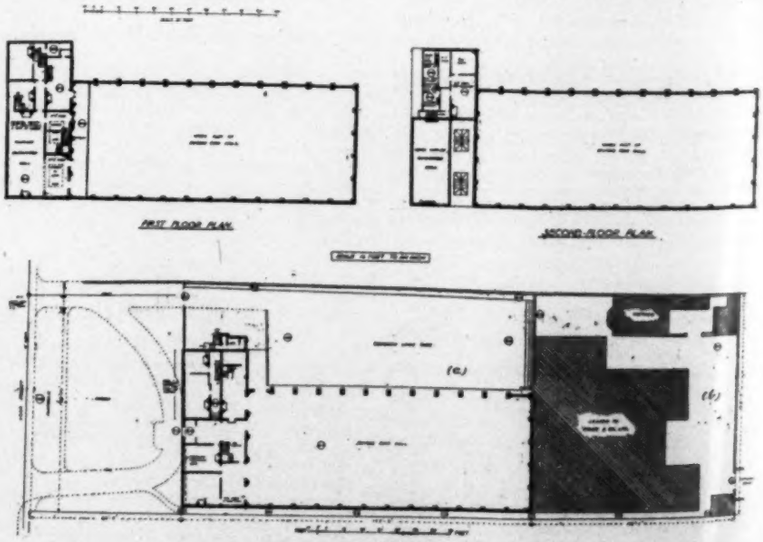
Yet Mr. Gotch's success is not a matter of supply and demand. He has written a history of an interesting period in an interesting way. For many years before these pages first saw the light he must have spent his time in a way which is as pleasant as any occupation can be, in creating within his own mind a vivid picture of his period in all its aspects. He must have read far beyond the limits of the architect's bookshelf, and yet his knowledge of the architecture in question is profound. And all this store of learning is presented readably and concisely. His book has not been superseded; indeed it has had no competitor, and it is no more likely to be superseded in the next than in the past decade.

We venture to believe that Mr. Gotch's books are popular because they take count of contemporary history and do not confine themselves to endless criticisms and strings of technical terms. Criticisms of architecture are wonderfully ephemeral if they simply represent the taste of a period, and even to architects they may become very dull. An account of the buildings of any historical period must be written primarily as a history and not as a critique. The criticising must be temperate. In this respect, as in his avoidance of what is sarcastically called "fine writing," Mr. Gotch shows the breadth of his outlook. This is an account of Early Renaissance Architecture, not a frantic defence of the period as opposed to Neo-Grec or Decorated Gothic.

It is always interesting to compare the second edition of a good book with the first, to see what changes have become necessary in the interim. In this case little of importance has been written of the period except a paper in the R.I.B.A. *Journal* by Mr. Gotch himself, and various monographs on Renaissance houses in different districts in England, published by Mr. Batsford. These find their due place in the bibliography, but we fail to note any serious alteration in the text of the book excepting the omission of certain paragraphs describing illustrations also omitted and the addition of one or two other paragraphs for new illustrations added. From a literary point of view, then, the book is practically identical in both editions.

As regards appearance, there have been changes. The margins have been reduced and the design of the cover altered.

But the most obvious changes are to be found in the number and selection of the illustrations. The first edition had 318 illustrations, including plates, the second one has only 303. In the first edition they were numbered as "plates" and as "illustrations in the text" in Roman and in English numerals respectively. In the new issue they are all numbered consecutively, the only practical way. It is strange that a publisher of Mr. Batsford's acumen has not realised the desirability of this simpler method for all such books. The reduction in number of the illustrations has been very dexterously done, so that one hardly realises that any of the old friends have gone. And we congratulate author and publisher on having preserved something like a reasonable balance



Glaciarium, Lord-Street, Southport.

between letterpress and illustrations. Sometimes one is tempted to think that books on architecture, written and read by architects, consist simply of fine plates with the minimum of explanatory text, while those written on architecture by laymen (and presumably read by laymen) often make their story far too long and attach too little importance to the very important matter of illustrations. Mr. Gotch, as usual, writes as a reasonable man for others of his kind.

Where illustrations have been omitted outright there are no yawning gaps. Some of the details from Layer Marney, Old Moreton, and Christchurch Priory have disappeared, also three doorways, three exterior views of small houses, and five plates of interior details. The interesting series of plans by John Thorpe, in the last chapter but one, remains as before.

On the other hand, some new plates have been added—*e.g.*, Lord Exeter's garden at Wimbledon (Fig. 157), a Garden House at Montacute (Fig. 160), and an excellent view of Blickling Hall (Fig. 1), which very properly occupies the post of honour formerly held by the semi-Gothic fan-vaulting from Henry VII.'s Chapel.

The unsatisfactory details of Sutton Place have been superseded by good photographs, and Compton Winyates and Hengrave Hall, among other buildings, have been photographed from another point of view. Moreover, a large number of blocks have been renewed, apparently from the same originals, and are now much clearer than formerly. Of these we may cite Fig. 211. Figs. 221 and 241 are new views of subjects illustrated in the first edition. In many cases the "leading" round the original blocks has been removed, and this also is an improvement. One could wish that some more attractive sketches could have been substituted for the small drawings of Lacock Abbey and Clegg Hall, but these are very trifling criticisms on so admirable a book.

Commercial Paints and Painting. By A. SEYMOUR JENNINGS. (224 pp.; 8¼ in. by 6 in. (Constable. 1914. 6s. net.)

THERE are many books on paints, but we think that the author of this work has fully justified his addition to the literature of the subject, since few works will be found which give so much practical and readily accessible advice such as the architect or engineer requires. Indeed the number of matters which really need attention, if paint-work is to be successfully carried out, will come as a surprise to any writers of the usual cursory specifications who peruse this book.

After pointing out the ultimate economy of good material, Mr. Jennings describes paint ingredients in the reasonable limit of forty pages. This is followed by some details of cost and physical characteristics and a short chapter on tests from a strictly lay standpoint.

A very useful chapter, entitled "Paint Most Suitable for Different Surfaces," then gives advice on treating such diverse things as cement, plaster radiators, and blackboards, and as an instance of the practical nature of its contents may be quoted: ". . . plasters such as sirapite . . . become hard and smooth . . . giving no key. The only successful way . . . is to apply a coat of sharp colour . . . just as soon as the plaster is sufficiently set to withstand the pressure of a brush." The flaking of paints and distempers and hard plasters is a frequent source of trouble.

After a short description of tools and their uses, defects in paint-work are dealt with, and then specifications in some detail. The book concludes with a chapter upon paint spraying and dipping, processes of which under the stress of competition we may expect to hear more. Finally a necessary index is provided.

Forming one of the publisher's Westminster Series, the book is well printed, and we are able to recommend it as a readable and useful addition to the library of the architect and engineer.

Sanitary Engineering. By FRANCIS WOOD, M.Inst.C.E. (London: Charles Griffin & Co. Price 8s. 6d. net.)

THIS is the third edition of a very practical treatise on town drainage and sewage and refuse disposal, and it has been revised to bring the matter more up to date and in conformity with modern practice. The subject has been treated by the author on very broad lines, and such matters as the design of retaining walls have been introduced to render the book as useful as possible to a large number of readers. The notes cover house and land drainage in addition to sewers, and chapters are devoted to sewage pumping and ventilation. One of the most interesting sections is that dealing with the bacterial treatment of sewage, and herein the author gives a great deal of useful information. The question of sewage disposal is a very important one, and the text allocated to this portion of the subject occupies many pages, and the various methods are explained in a clear and concise manner. The chapters on Refuse Disposal includes descriptions and details of various destructor plants, and the design of chimneys and foundations has not been omitted. The volume is illustrated by numerous diagrams throughout, and the book is well arranged and very complete. The subject of sanitary engineering is a very large one, and we consider the author has achieved much by dealing with all the matters which are so closely allied to the main question of drainage work. He has kept the theoretical portions simple and easily understandable, while not allowing them to lose any of their value to the more advanced reader, and the book should appeal to students and practising engineers alike.

Scales for Ascertaining the Dimensions of Pipes, Drains, and Sewers. By C. E. HOUSDEN. (London: Longmans, Green, & Co. Price 1s. 6d. net.)

THE scales given in this little volume are taken from the author's "Water Supply and Drainage Systematised and Simplified," with which work their construction is fully explained. The dimensions to the nearest inch of pipes, of half pipes, and of any design of drain or sewer in which a semicircle or circle can be inscribed, can be ascertained from them, the user adopting any desired coefficient. Examples of their use are given and several diagrams are introduced, and the book should prove useful to the practical engineer on account of the saving in time effected by the use of the scales.

BOOKS RECEIVED.

BELL TOWERS AND BELL HANGING. By Sir Arthur Percival Heywood, Bart. (London: Longmans, Green, & Co. 2s. net.)

TOWN PLANNING FOR AUSTRALIA. By Geo. A Taylor. (Australia: *Building*, Ltd., 17, Grosvenor-street, Sydney.)

CORRESPONDENCE.

The New Expression.

SIR,—We would like to join issue with two of your correspondents of last week, Mr. George H. Widdows and Mr. W. J. Palmer-Jones, on this old matter of a "New Expression." We will not occupy your space by repeating your leader of 10th inst., although what you said might fitly be reprinted as your rejoinder, and, again, as your surrejoinder, if need be, so well was your case then stated. We will confine ourselves to contradicting Mr. Widdows and Mr. Palmer-Jones on one or two matters of fact and to asking a question.

"The Renaissance in its primary stage was due to no love for learning as such, but was brought about because the merchant class found that knowledge meant more money."—G. H. Widdows. Not the sort of knowledge the early Renaissance cared for, Mr. Widdows! The modern world may try to crush itself between the book-covers of Carl Marx, but the Renaissance was denied our latter-day advantages. The sentence we have quoted, in short, is bad history. It is not true.

Now, with much of Mr. Widdows' point of view we are in entire sympathy. All will agree with him that the downfall of architecture, as of so many other fine things, has coincided with the love of wealth for wealth's sake. But he will not find many to agree with him that real architecture was done with when the Renaissance began. Why? Because the various manifestations of the Renaissance comprise some of the most truly expressive styles and examples of architecture. These examples—Italian loggia or casino, French château or Scottish castle, English mansion and Spanish *coro*—all these and others, with the perfect directness of confident youth and the complicated inflexions of a civilisation intensely alive yet very old, expressed and satisfied the physical and spiritual needs of their time. And these needs were not, as so often to-day, just money, money, money.

The work of the Renaissance is a reverie of the past, alive and dancing in the sunlight of its own more troubled day. It would ignore, although it cannot, the stigmata of spiritual pain which the Middle Ages have bequeathed for the perfection of Mansoul. And it is this, not money, which may be read in the work of the Renaissance.

Mr. Palmer-Jones opens by remarking that "throughout the ages human nature has remained essentially the same." To which we reply, in the words of a wise man, "The one thing we know about human nature is that it changes." No one should know this better than the architect, for how should a changeless human nature produce works so varied as those with which the history of architecture makes us acquainted? Human nature expresses itself in architectural style, but architectural style changes: therefore human nature changes. It seems simple.

Enough of contradiction, however. We wish merely to show examples of the kind of premises on which these gentlemen base their conclusions.

We would protest, too, against the assumption which underlies Mr. Palmer-Jones' argument, that, because certain things which were unpleasant or opposed at their inception have survived nevertheless and become desirable, all things which experience a similar beginning must necessarily come to the same end. It is not inevitable.

And now we would ask our question. It is addressed more particularly to Mr. Palmer-Jones. Regarding the three examples of the "New Expression" with which he illustrates his contention, we want to know what these designs express. One is labelled "Turbinenfabrik," and should, therefore, perhaps be put out of court. But as to the other two—what do they express? Could not the purposes they conceal have been more comprehensibly expressed in familiar terms, for as they stand they are Greek or, more accurately, German to us.

What do these things express? We of the Atelier are interested in expression. It is just in expression that we are interested. We hold that where a building satisfying one of the tolerably-defined human requirements is concerned a plan should need no title—it should "read" without printing; the elevations and sections should bear out and amplify the expression of the plan. The whole design should speak, but not shriek, of its purpose and of the degree and history of that purpose.

The plan of St. Paul's, for instance, is the outcome of a fight between the Classic dream of Wren and the English tradition, and on the whole the tradition won. We know the protagonists, we understand the contest, and we can read its petrified expression there to-day at the top of Ludgate-hill. The purpose of St. Paul's was to express the pomp of its period and the English notion of a cathedral. The City church, plan, elevation, and section expresses the Restoration preacher or late Puritan divine, and the requirements of his somewhat worldly audience. One walks down Pall Mall. The "Athenæum" stands as the resort of a dignified and rather sterile culture. The "Reform" expresses two stories of great apartments of equal importance. Those who go there have (or were intended to have) high, serious purposes, bent nevertheless on power. The "Carlton," next door, has, again, the two equal floors. It can, in the London of its day, be a club only, but of a more florid order than its neighbours—a trifle over-confident.

And so on infinitely. For character and purpose will out if the architect but let it, he using the materials and forms he finds to his hand. Architecture, again, is no one-man affair. If it express only the architect's frame of mind it will express something of comparatively trifling importance, for that frame of mind must be too separate and peculiar if it can be satisfied only with that which no one else can understand.

No. If there is to be a new expression it must come as the logical fulfilment of new requirements—let that be the architect's aim. But, after all, most of our necessities are of the "tolerably-defined" order to which we have referred. And there remains quite scope enough for all the intelligence the profession possesses in the direction of making this "definition,"

in so far as architects are concerned, more complete.

Finally, let us ask again what those examples of the "New Expression" express. And, further, will any two advocates of the "New Expression" agree, on the bedrock of definite terms, about what these, or any other examples, express?

We of the Atelier must thank you for your leader and your correspondents for their letters. The object of the Atelier is free discussion before all things. Only by a prolonged course of battles of ideas can the profession be raised from the condition of a house divided against itself

Mr. Widdows and Mr. Palmer-Jones, and any who think with them, will find a battle-ground either at the present Atelier or at the second Atelier soon to be opened, and a phalanx sufficiently considerable to be worth conquering. Nay, further, we will make this firm offer—If they care to put a resolution in favour of the "New Expression," we will put up an opponent and provide a fair and open field for debate. We suggest some day towards the end of September, for holidays are in the air just now, and conclude by saying that we hope both gentlemen will accept this sincere invitation.

A. B. AND C.

The R.I.B.A. Proposed Charter.

SIR,—The letter over the signature "Five Associates" in your last issue is interesting because it clearly states the views of a section of the Associate members of the Institute.

The noble five declare the nature of the appeal of the Sheffield circular is "a demand that *no distinction* should be made between the Licentiate and Associate classes," and go on to say that, "the personal efforts, work, and expense entailed by those who have sought to qualify for admission to the Institute by examination shall be all to no purpose and of no avail"; and finally in this connection, "This body of Licentiates evidently does not recognise any claims of merit, but by some train of reasoning would seek equal distinction for which they have 'toiled not,' etc."

Now, Sir, examine these points, and ask the "Five Associates":—(1) Why should any distinction be made between Licentiates and Associates *on a register* of those qualified to practise? (2) What further reward do the "Five Associates" want for their efforts, work, and expense in passing their examinations than the honour, glory, and kudos of writing A.R.I.B.A. after their names and having it printed on their notepaper? (3) Do the "Five Associates" seriously think that the only claims to merit are those proven by examination?

If "by some train of reasoning Licentiates seek equal distinction [with Associates] for which they have 'toiled not,' etc.," it seems to me that they are better than those who, without reasoning, would selfishly arrogate to themselves some further distinction than that for which their efforts were made and for which they worked and paid. They have fought a good fight for the honour of the title, A.R.I.B.A.—they have it. Why ask more?

Medical practitioners are *all* called "Dr.," but all are not M.D.'s.

All solicitors are entered on the rolls, but no distinction is made between them.

Accountants do not star the men who have entered by examination.

An honorary degree is of higher value than an earned degree in any University. The Church and the teaching profession (except in rare cases) are content to state the degree without insistence upon the class. Architects under the proposed charter ask for an unheard-of absurdity. No other profession attempts to make a register anything but a register. Associates want to make it an advertisement of their merit in passing examinations.

I have little to say with regard to the analysis of the Sheffield circular because the circular itself does not clearly state—what is a matter of fact—the true position taken up by Licentiates, viz., that there is *no reason* why Fellows and Associates of the R.I.B.A. should be singled out *on a register* under a charter.

Can five Associates, or 1,500 Associates, honestly say that a young man (with the laurels still fresh on his brow) of twenty-five, who has just managed to pass his final, is more qualified than the head of a firm doing a large amount of important work who has been in practice thirty years? That is what they want the register to do.

I can assure "Five Associates" that Licentiates do not ask for themselves anything they would deny to all on the register, although I admit this is not made clear in the circular.

In what way do the Licentiates "attempt to obtain—through a combination of circumstances—what has hitherto been reserved for those who have cared to work for what has been considered to be the best distinction in architecture"? Have they asked to be made Associates? Did they approach the Institute, or did the Institute approach them? Were they admitted without question, or was their work examined? Which is really the better qualification to be on the register—a diploma that one has been coached to pass examinations at leisure, or ten to thirty years' solid work and reputation?

"Five Associates" have a standard of fair play very much their own, I hope, which appears to be to take all and give nothing. They will be disappointed in their hope that little support will be given to the petition, which, judged by their standard of equity, is "unworthy."

What "respect" will be shown to the petition by the Council of the R.I.B.A. I cannot say, but I sincerely trust neither more nor less than it deserves.

Once more may I remind "Five Associates" that we are discussing a register of architects, and *not* a list of members, corporate and incorporate, of the R.I.B.A.? We are not objecting to render homage to the Cæsars of the Institute, but they are not necessarily the Cæsars of the register. JOHN E. YERBURY.

SIR,—The Licentiates wish the Associates to have the full credit due to them for having passed the examinations. They have a distinction in their letters to which they can add, if they so please (by exam.), but by expecting the Licentiates to put fourteen letters after their names only confuses matters and leads the public to think that the latter are the examination people.

I do not see why any exception should be taken to any Licentiate who has passed in Engineering or Surveying. There are at least 130 corporate members, I think, who have similarly qualified; besides, the Licentiates have passed in Architecture by submitting drawings and giving details of their training. What else is it necessary to examine them in—their teeth?

I feel certain that many Associates would feel very much hurt if it were suggested that they were unable to set up a bit of steel construction or reinforced work. What is that, after all, but engineering?

I have no wish to sing the praise of Lord Grimthorpe as an architect, but I do say this—that because he was a great authority on clocks did not make him any the less a redoubtable lawyer; and how any member of the Institute can make himself believe that to pass the examination is considered to be the best distinction in Architecture, passes my understanding. If they have the effect of giving people swollen heads I can see now why so many students have left them alone. If I may say so, I think the best distinction for an architect, if he should get the opportunity, is to try to design a building that will not only be satisfactory now, but will live to please others long after his own little life has flittered out.

The work of John Thorpe, Inigo Jones, Chambers, and others has charmed and delighted many generations. Who cares a brass button whether they ever passed an examination? Did Norman Shaw, Brydon, Bentley, Bodley, or John Douglas, of Chester, ever pass? I think not. But they produced some splendid buildings. Are not the walls of the Institute covered—I might almost say jewelled—with the portraits of men who knew no official test? It is extremely childish for those who have gone in for these examinations to be continually going about and treading on the corns of those who have not, to remind them of the fact. Is that likely to do themselves, the Institute, or architecture any good? Have not the Associates gained their knowledge by their efforts and the money spent, and did not the Licentiates, in their day, when there were less facilities, also go to considerable expense and labour to learn their profession?

The Institute has decided on a policy of Registration by charter; and, personally, I think that is far preferable to a hard-and-fast Registration Bill, even if the latter had any chance whatever of getting through at present; and have we not seen sufficient results lately of hasty legislation?

If a Registration Bill is really needed it will be far better later to calmly prepare a first-rate measure when the air is more cleared and the profession is more united.

That is the battle that has to be fought—the battle of unity as against dismemberment; and every trained man should do his best to attain that end. The letter signed "Five Associates" suggests that the petition to be presented from the Licentiates to the Council is likely to receive but scant respect. It would indeed be a very ill-elected Council which would not give such an important matter—viz., the views of over 2,000 members—their very careful and anxious thought. H. C. PULLIN.

SIR,—As an Associate of many years' standing I should like to enter my protest against the action of certain abnormally zealous young Associates, who apparently claim to speak for the whole of their class. I am quite willing myself to accept the entire programme as put forward by the Council of the Institute, and I believe that there is a very large body of Associates who share this view.

CHARLES E. BARRY.

Low Painting Tenders for the London County Council.

SIR,—Will you kindly allow me a small space in your valued journal to place the enclosed lists of tenders for works under the London County Council before your readers and to ask if it is right that in each case such absurdly low tenders should be accepted by the Council? It would be interesting to know if the Council expect the work to be carried out in accordance with the specifications, and if they will see that the wages clause is strictly adhered to.

Painting and Tarring Works at Horniman-gardens.

R. Harding & Son	£321
Watson & Ellwood	164
W. J. Mitchell & Son	140
T. Brown & Son	135
H. King & Son	94
H. Line, Peckham (accepted)	88

Painting and Tarring Works at Wandsworth-common.

R. Harding & Son	£563 0
Watson & Ellwood	298 12
R. S. Ronald	287 0
J. Marsland & Son	275 0
F. W. Fletcher, Tooting (accepted)	91 10

Painting and Tarring Works at Brockwell Park.

R. Harding & Son	£786
R. S. Ronald	475
Watson & Ellwood	340
F. W. Fletcher, Tooting (accepted)	237

Painting and Tarring Works at Chelsea Embankment-gardens.

Watson & Ellwood	£156 0
R. S. Ronald	130 0
F. W. Fletcher, Tooting (accepted)	56 10

HARDY KEEN,
Architect and Surveyor.

[*** Tenders are accepted by the London County Council after they have received competent advice, and we may add that we have never heard of complaints of the quality of the work done under the authority of the London County Council.—ED.]

Sheffield University: Architectural Tour in South France.

SIR,—Will you kindly grant me space in your Correspondence Columns in which to draw attention to the fact that the final arrangements for this tour are now being made and that those desirous of attending should send in their names without delay?

The tour will start on August 31, and the following places will be visited:—Poitiers, Limoges, Perigueux, Cahors, Conques, Rodez, Rocamadour, Cordes, Carcassonne, Nimes, Arles, Avignon, Orange, Le Puy, Issoire, and Clermont Ferrand.

In order to obviate any possible misunderstanding I may say that the tour is open to all interested in the study of architecture, whether ladies or gentlemen.

I shall be glad to send further particulars of the tour to any desiring them.

W. S. PURCHON
(Lecturer in Architecture, University of Sheffield).

GENERAL NEWS.

Professional Announcements.

In accordance with their usual practice, the offices of Messrs. John W. Simpson, F.R.I.B.A., and Maxwell Ayrton, A.R.I.B.A., will be closed from August 3 to 17, both days inclusive, for the annual staff holidays. Arrangements will be made as usual for dealing with all business referring to buildings in actual progress.

Mr. J. Craddock Perkin, F.R.I.B.A., formerly of Graham House, 3, Tudor-street, E.C., has now removed his office to Bridge House, 181, Queen Victoria-street, E.C., close to Blackfriars Station. Telephone, 2420 Central.

A Fine Arts Parliamentary Committee.

It is proposed to form a Parliamentary Committee consisting of Members of both Houses interested in art matters. The objects which such a Committee would have in view would be partly general, partly special. Under the general head is included the question of increasing the national collections. Another question is the proposed Ministry of Art. Secondly, special questions, mainly of administration, are frequently arising in connection with the Government Departments relating to art, and the proposed Committee could direct public attention to what was being done.

University of London.

Professor S. D. Adshead, Hon. M.A. (Liverpool), F.R.I.B.A., has been appointed as from September 1, 1914, to the University part-time Chair of Town Planning, tenable at University College. Since 1909 Mr. Adshead has been Professor of Town Planning at Liverpool. He was the author, in 1910, of the scheme for the reconstruction of the Duchy of Cornwall estates in South London, and has been concerned with town-planning operations at Birkenhead, Wolverhampton, and other towns. The Chair of Town Planning is associated with the University Department of Architecture, of which Professor F. M. Simpson is Director; and the engineering aspects of town planning will be dealt with by the recently-appointed Chadwick Professor of Municipal Engineering, Mr. E. R. Matthews, A.M.Inst.C.E. It will be remembered that new and convenient buildings have recently been provided for the Department on the north-west front of University College.

The Zoological Gardens.

Amongst the several improvements which the Zoological Society intend gradually to effect is the construction of another tunnel to supplement the existing one, built by Decimus Burton. The contract is given to Messrs. Somerville & Co., who erected the Mappin terraces. The tunnel will be wider and higher than the present one, and will be made in part beneath the Western Aviary, near the chief entrance in the Outer Circle, Regent's Park.

Brighton Sea Front.

A long-vexed matter has now, it seems, been determined by a resolution, made last week by the Town Council, to expend £25,000 upon the erection of a concert hall for the municipal orchestra on the Aquarium site and a r construction of the adjacent terrace.

Church Building Society.

The Incorporated Church Building Society held its usual monthly meeting on the 16th inst. at the Society's House, 7, Dean's-yard, Westminster Abbey, S.W., Mr. George Cowell, F.R.C.S., in the chair. Grants of money were made in aid of the following objects, viz.—Building new churches at Beaconsfield, St. Michael and All Angels, Bucks, £100; Mardy, All Saints, Glam., £150; West Bromwich, St. Andrew, £100; and Barry, All Saints, Glam., £200; rebuilding the church of St. Peter, Stanley, Wakefield, £150; and towards enlarging or otherwise improving the accommodation in the churches at Broadstairs, Holy Trinity, £90; Church Brough, St. Michael, Westmorland, £25; Clapham Rise, St. John, Surrey, £25; Deal, St. Leonard, £40; East Leake, St. Mary, Loughborough, £25; Elton, St. Stephen, Peterborough, £15; Llanberis, St. Padarn, Carns, £60; Tunstead, St. Mary, Norwich, £50; and Kilsby, St. Faith, Rugby, £10. Grants were also made from the special Mission Buildings Fund towards building mission churches at Blackmill, Glam., £20; and Connah's Quay, near Chester, £40; Grants were also paid for works completed:—Hove, St. Agnes, Sussex, £150; Copnor, St. Alban, Portsmouth, £200; Legaby, St. Thomas, Lincoln, £15; Highgate, St. Augustine, Middlesex, £75; East Bridford, St. Peter, Notts, £40; Hampstead, All Hallows, Middlesex, £150; Chalfont St. Peter, All Saints, Bucks, £90; St. Teath, Cornwall, £25; Pirton, St. Mary, Herts, £25; Blofield, St. Andrew and St. Peter, Norwich, £35; Coelbren, Brecons, £25; Laira, St. Mary-the-Virgin, Devon, £100; White Horse-road, Croydon, £25; and Ushaw Moor, St. Luke, Co. Durham, £50. In addition to this the sum of £340 was paid towards the repairs of fourteen churches from Trust Funds held by the Society.

Bexhill-on-Sea.

We have received from the Homeland Association, Ltd., a copy of their Handbook to Bexhill-on-Sea. It is an excellent little work and contains numerous illustrations of places of special interest, as well as a street plan of the town, in addition to notes on principal features of the historic neighbourhood, and other useful and interesting matter. The price of the publication is 6d. net.

Sale of Norris Castle.

Mr. Richard Burbidge (Messrs. Harrods, Ltd.) has purchased the Isle of Wight property, Norris Castle, which adjoins his other estate at Osborne. Norris Castle was built by Wyatt in 1804 for Lord Henry Seymour, and it was at various times occupied by the Duchess of Kent and Queen Victoria.

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Viscount Peel, Chairman, presiding.

Tenders.—The following tenders were received:—For alterations and additions to the hot-water heating apparatus at the undermentioned schools:—(1) Mowlem-street (Bethnal Green, N.E.); (2) Hagne-street (Bethnal Green, S.W.); and (3) Malmesbury-road (Bow and Bromley). For the erection of cottages on section C of the Norbury estate. For painting, etc., works at the Southern outfall works.

Loans.—The Finance Committee recommended that loans be made to public bodies, as follows:—£3,358 to the Battersea Borough Council for reconstruction of pipe sewers, and £3,500 for electricity undertaking; £60,000 to the Hackney Borough Council for electricity undertaking; £14,107 to the Hammersmith Borough Council for paving works; £5,316 to the Islington Borough Council for electricity undertaking; £35,576 and £6,700 respectively to the Lambeth Borough Council for paving works.

Isle of Dogs Pumping Station.—The Main Drainage Committee recommended that tenders be invited by public advertisement for the building work in connection with the enlargement of the Isle of Dogs storm-water pumping station.

Clapham Common Conveniences.—The Parks and Small Holdings and Allotments Committee recommended that tenders for the erection on the north-western portion of Clapham Common of additional conveniences for men and women be invited from selected firms.

Theatres, etc.—The Theatres and Music Halls Committee have approved of the following proposals:—Academy of Dramatic Art, Malet-street—fireproof curtains; Earl's Court Exhibition—proposal to use a portion of Queen's Palace for concerts; Great White City, Anglo-American Exhibition—arrangement of building No. 64; 103-5, Kingsland High-street—ventilation arrangements; New Gallery Restaurant—alterations to grill-room; Olympia—arrangement of stands for Engineering and Machinery Exhibition, September and October, 1916; Orion Hall, East Bank, Stamford-hill—electric light installation; Surrey Theatre, Blackfriars-road—improvement of the dressing-room accommodation; 221, West Ferry-road—proposed new entrance and front and alterations to ceiling.

New Sessions House.—Further consideration was given to the Local Government Committee's recommendation that Messrs. W. E. Blake & Co.'s tender, amounting to £98,980, for the erection, within twenty-one months, of the New Sessions House at Newington, be accepted. It had been moved that the recommendation be referred back to the Committee with instructions to invite fresh tenders for the execution of the work from firms who had not locked out their workmen. Mr. Ernest Gray, however, moved an amendment to this to the effect that Messrs. Blake & Co.'s tender be accepted, provided that the Committee were satisfied that that firm were fully prepared to comply with the Council's requirements in respect of rates of pay and conditions of labour. This was carried. Mr. Johnson then moved, as a further amendment, that arrangements be made for the execution of the work by the direct employment of labour. Mr. J. D. Gilbert seconded. After discussion the amendment was lost on a division by sixty-seven votes to forty-three.

Mr. Phillimore moved the addition of words providing that the firm should give the Committee an assurance that they were not engaged in such a dispute with their employees as would in any way delay the normal starting of the work. This motion was lost, and Mr. Gray's amendment adopted as the substantive motion.

The following matter was dealt with at the previous meeting of the Council:—

L.C.C. New Motto.—Major Gray, Chairman of the General Purposes Committee, brought up a recommendation that the motto to go with coat of arms recently adopted by the Council should be "Loci dulcedo nos attinet" (The sweetness of the place holds us). Mr. O. Lewis proposed, as an alternative, "Urbs urbium filia fluminia." Mr. Bernard Holland, in moving that the matter be sent back for reconsideration, said that the second motto was his own suggestion, but a better one might be found. Sir John Benn said he wanted a motto which could be read by the "man in the street," and suggested following the example of Glasgow, whose motto was: "Let Glasgow flourish," or choosing Milton's words, when he wrote of London: "A city of refuge: the mansion house of liberty." After a lengthy discussion the Council adopted a motion instructing the Committee to submit a motto in English.

FIFTY YEARS AGO.

The Thames Embankment.

THE first stone of the Thames Embankment, of the northern side, was laid on Wednesday last, by Mr. Thwaites, in the presence of the First Commissioner of Her Majesty's Works and of Lord John Manners, and those assembled on the concrete-bed and footings of a portion of the retaining wall and sewer contruction, in a tight coffer-dam, at the depth of about 21 ft. below the level of high water. The spot chosen for the formal commencement of the undertaking was in the line between Hungerford Bridge and Westminster Bridge, and not far from Whitehall stairs. The work of the contract for one portion of the Embankment, in fact, commenced in the autumn of last year, borings to ascertain the nature of the strata and foundation having been made by the engineer some time previously; but that which has hitherto presented itself to view, including the greater part of the walling of iron caissons, belongs to the appliances of construction, and will form no part of the finished work above the bed of the river. When complete the work generally will present above low-water line a facing of granite, with a curved batter, surmounted by mouldings and a parapet wall with a plinth and cornice, and with block pedestals which are to carry standards for lamps and mooring-rings; whilst the line will be broken by the bridges and by recesses for the steamboat piers and by landing-stairs at other points. Behind the wall will be the low-level sewer, which we, last week, described in the extremities of its course, and above it a subway for water-pipes and telegraph wires, though not for gas—considered as dangerous. Further in the rear will come the railway joining Kensington and Brompton with the City and the east of London, and forming, with the Metropolitan, the Inner Circle. The top of the Embankment and reclaimed ground will be appropriated partly as a roadway 100 ft. wide, partly as recreation ground, and partly for buildings; and the road will be connected with the present thoroughfares by new streets.

[*** We give the above extract from the *Builder* of July 23, 1864.]

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ILLUSTRATIONS.

Barnsley Town Hall.

THE new buildings are to be placed in Church-street on an isolated site, and a difference of levels amounting to 13 ft. presented difficulties in planning. The Council Chamber has been placed in a central position, and the Council suite, consisting of two Committee-rooms, retiring-room, Mayor's parlour and reception-room for Mayoress are placed along the front. There are two entrances and two staircases. The building is to be faced on all sides with Yorkshire stone, the lower portion being rusticated.

All floors and staircases are fireproof construction, those of the rooms being finished with wood blocks, the corridors, lavatories, etc., in terrazzo and the staircase in blue York stone. All corridors, staircases, and lavatories will have tiled dadoes. The Council suite will be finished in Austrian oak, fumed and wax-polished. The heating will be low-pressure hot water, and the ventilation will be by means of extraction fans. The estimated cost of the building is £18,582. The architect is Mr. Percy H. Topham, St. Anne's-square, Manchester.

New Sessions House, Newington Causeway.

THE new court house is to have four floors. On the lower ground floor will be the cells and other accommodation for the prisoners, the police common-room, the refreshment-room for the public, and large rooms for the storage of records. The ground or principal floor will be about 6 ft. up from the courtyard. The positions of the chambers have been fixed chiefly by the need for quietude in the courts. The court-rooms, therefore, will be at the back part of the building. In the front part will be the public waiting-hall, entered from the main forecourt through a vestibule. At each end of this hall will be a wide staircase. In the well of one will be a public lift. At the back of the hall small staircases will give access to the public galleries of the criminal courts. Behind the hall will be the three court-rooms—the middle one for civil business, those right and left for criminal cases. To keep out the noise in the public hall they will have enclosed lobbies, into which only those with business in the courts will be allowed to go. To the sides of each of the Criminal Courts will be the rooms for the witnesses and the juries. About them will be corridors leading to the other parts of the building and connecting all with the public hall. By these corridors the Chairman, the justices, barristers, and court officials will be able to pass between their rooms and the courts without touching the parts of the building used by the public. Behind the corridor at the back of the courts will be the rooms for the Chairman and Deputy-Chairman of Quarter Sessions, for the Clerk of the Peace, for court officials, and also the library. They will have an outlook over the Council's land. A wing to the right of the public hall will hold the cloakrooms and robing-rooms for the barristers; and another to the left of the hall the public office of the Clerk of the Peace. The justices' cloakrooms will face Union-road. Along this front, too, will be the offices for assessments business, and at the end nearer to the courts the room for the clerk of the Standing Joint Committee. Here a private staircase and lift will connect the rooms of the justices with the committee-room on the first floor and the common and refreshment rooms on the second floor. The entrance for the Chairman, the Deputy-Chairman, and the justices will be through a small courtyard at the northern end of the main forecourt, screened off by wrought-iron railings and gates. In a corresponding small courtyard at the southern end will be the entrance for the barristers. Courts Nos. 1 and 2 will be for criminal cases. Each will have a dais with seats for a bench of twenty magistrates and a Chairman, and also the furniture usual for criminal procedure. In these courts there will be seats for a spare jury, and as the number of cases dealt with day by day will be very great, to lessen the time between one case and the next, each dock will have four separate stairways, two for each sex, one "up" and one "down," with doors to shut them off from the court. The positions for the Chairman, witnesses, counsel, and jury have been kept as close together as may be. Court No. 3 is for civil business, and so there will be no dock, and the furniture will be movable, so as to lend itself to arrangements to suit either licensing or assessment business. The first floor will be the room for the grand jury, for the grand jury witnesses, and for the common jury-in-waiting; also a committee-room and several offices. The second floor is used for the luncheon and common rooms for the justices, barristers, and solicitors, with the necessary kitchens and offices. The quarters for the resident housekeeper will be on the first and second floors, at the south-east corner of the building. The parts of the building seen from the forecourts and from Union-road will be faced with Portland stone, the remaining parts with stock brick. The pitched roof will be covered with stout grey slates in diminishing courses, the domed roofs of the court-rooms with asphalt. For architectural character the aim has been at breadth and balance.

W. E. RILEY.

Students' Work, Royal College of Art, South Kensington.

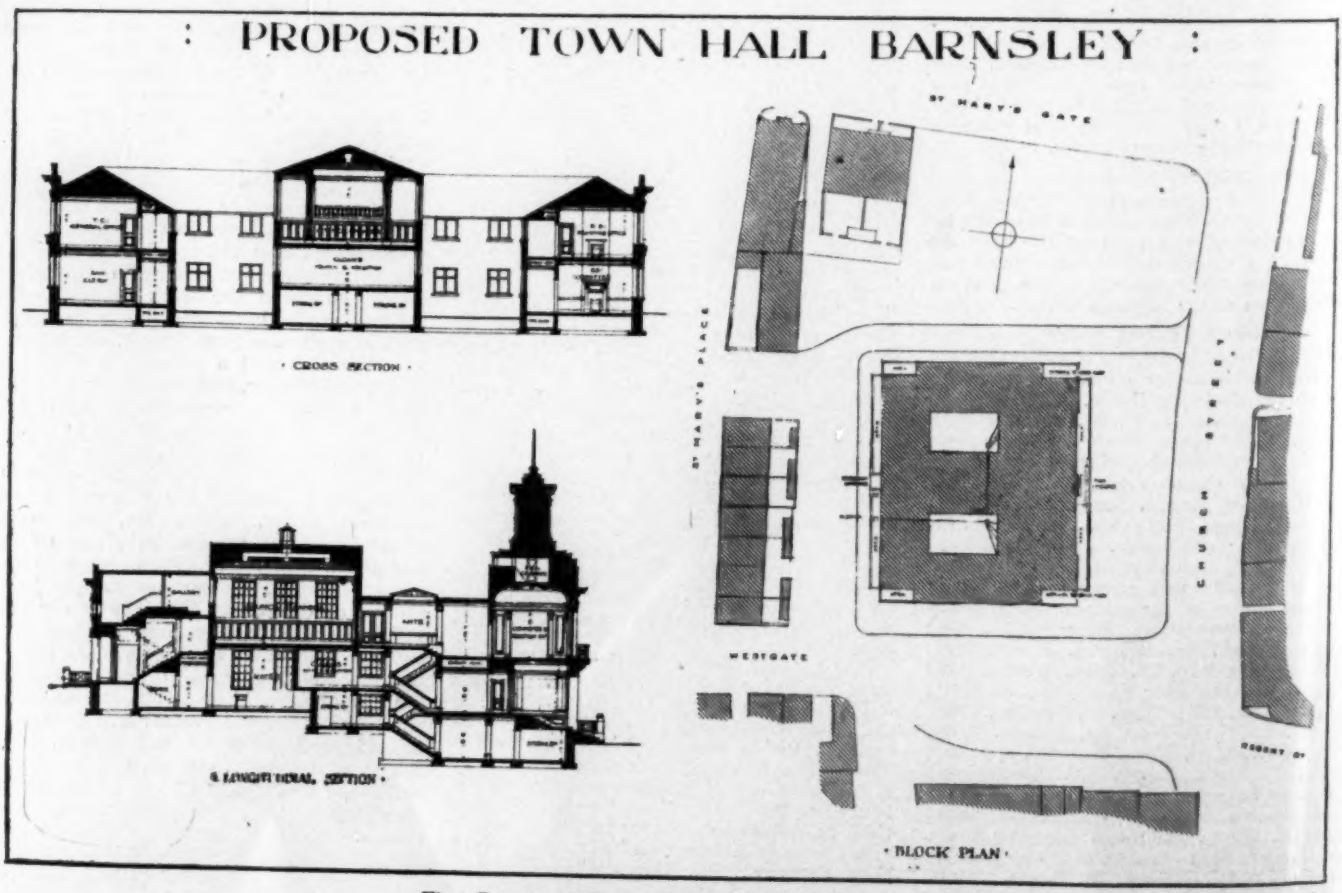
THESE illustrations show some of the excellent work of the students of the Royal College of Art, South Kensington. They are now on exhibition at the Rooms of the Architectural Association, Tufton-street, where work by students of other schools is to be seen. We shall give an article on the methods of the Royal College next week.

MEETING.

WEDNESDAY, JULY 29.

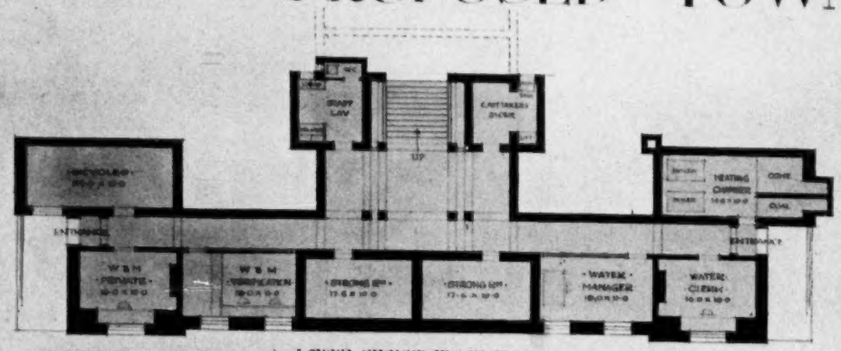
Northern Architectural Association.—Annual excursion, Carlisle.

: PROPOSED TOWN HALL BARNSLEY :

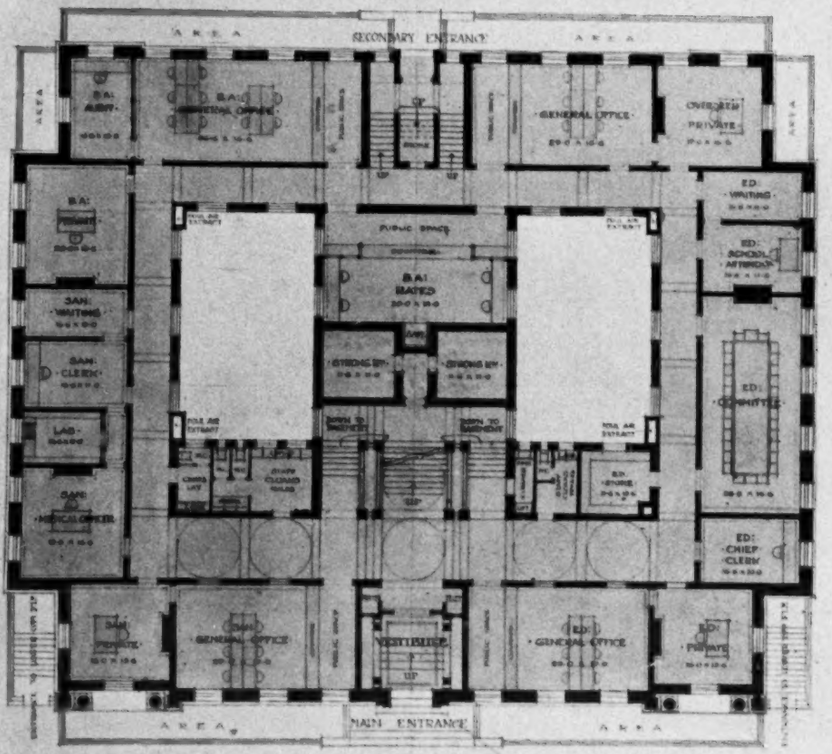


First Premiated Design, by Mr. P. H. Topham.

PROPOSED TOWN HALL BARNSLEY



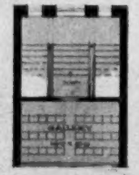
LOWER GROUND FLOOR PLAN



UPPER GROUND FLOOR PLAN

ESTIMATE OF COST

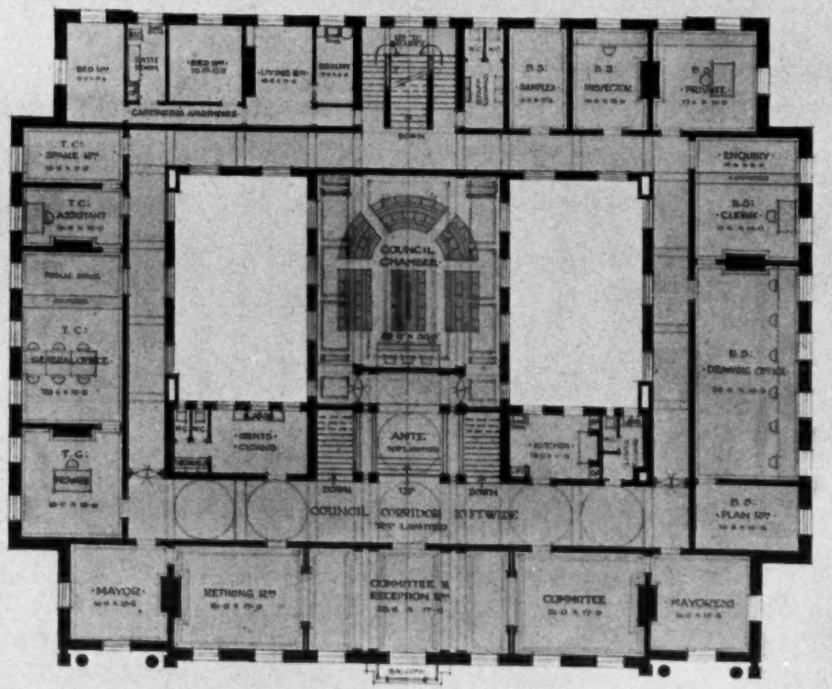
EXTRACT FROM REPORT:—
ALL WORK BELOW
GROUND FLOOR LINE, FROM COST AT 18d £ 32150
REMAINDER OF BUILDING ABOVE £ 16062
TOTAL £ 48212.



GALLERY PLAN

FOR RELATIVE POSITIONS OF THEATRE AND HAND SEE SECTIONS

MEZZANINE PLAN
BETWEEN GROUND & FIRST FLOORS

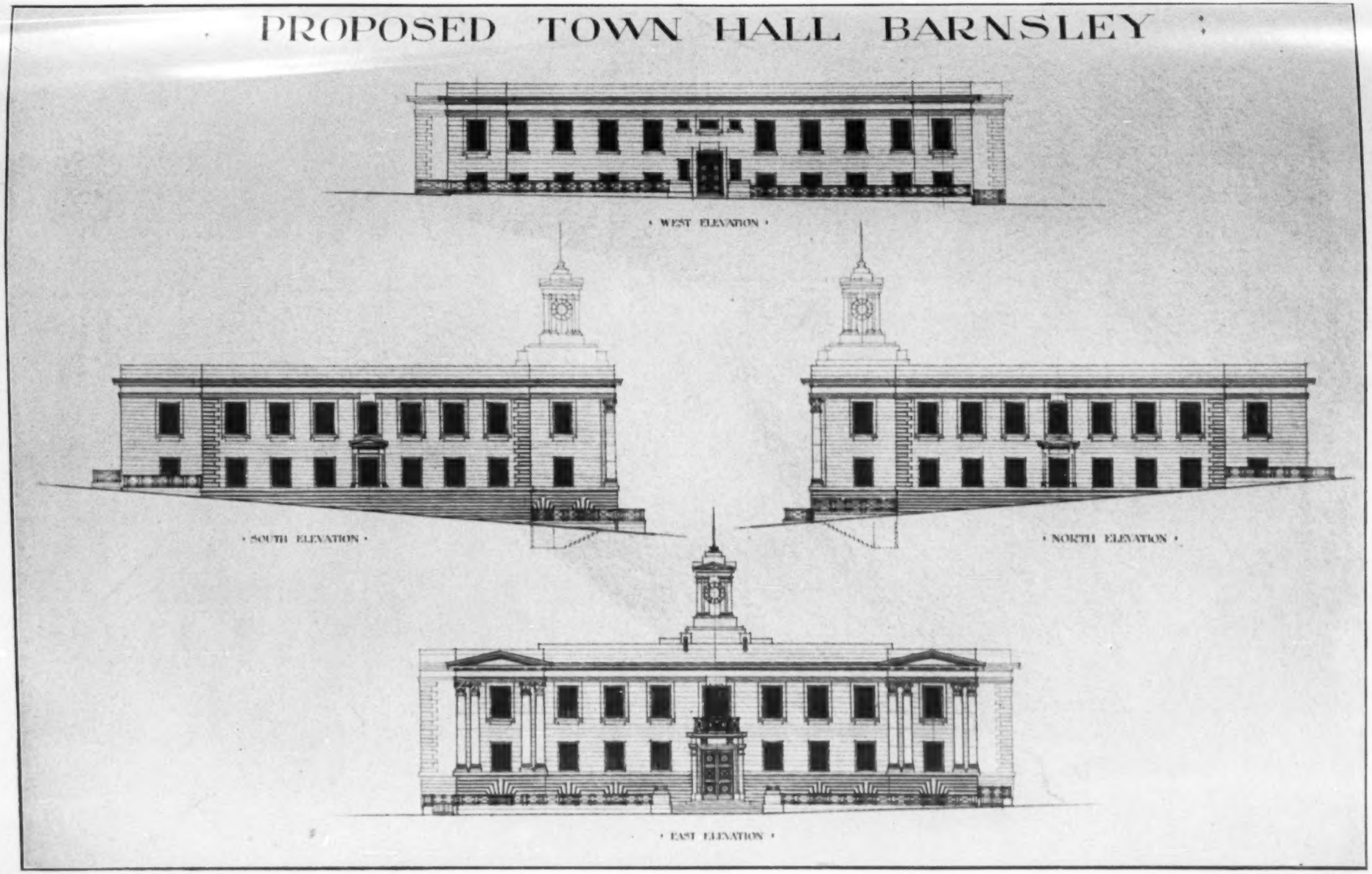


FIRST FLOOR PLAN

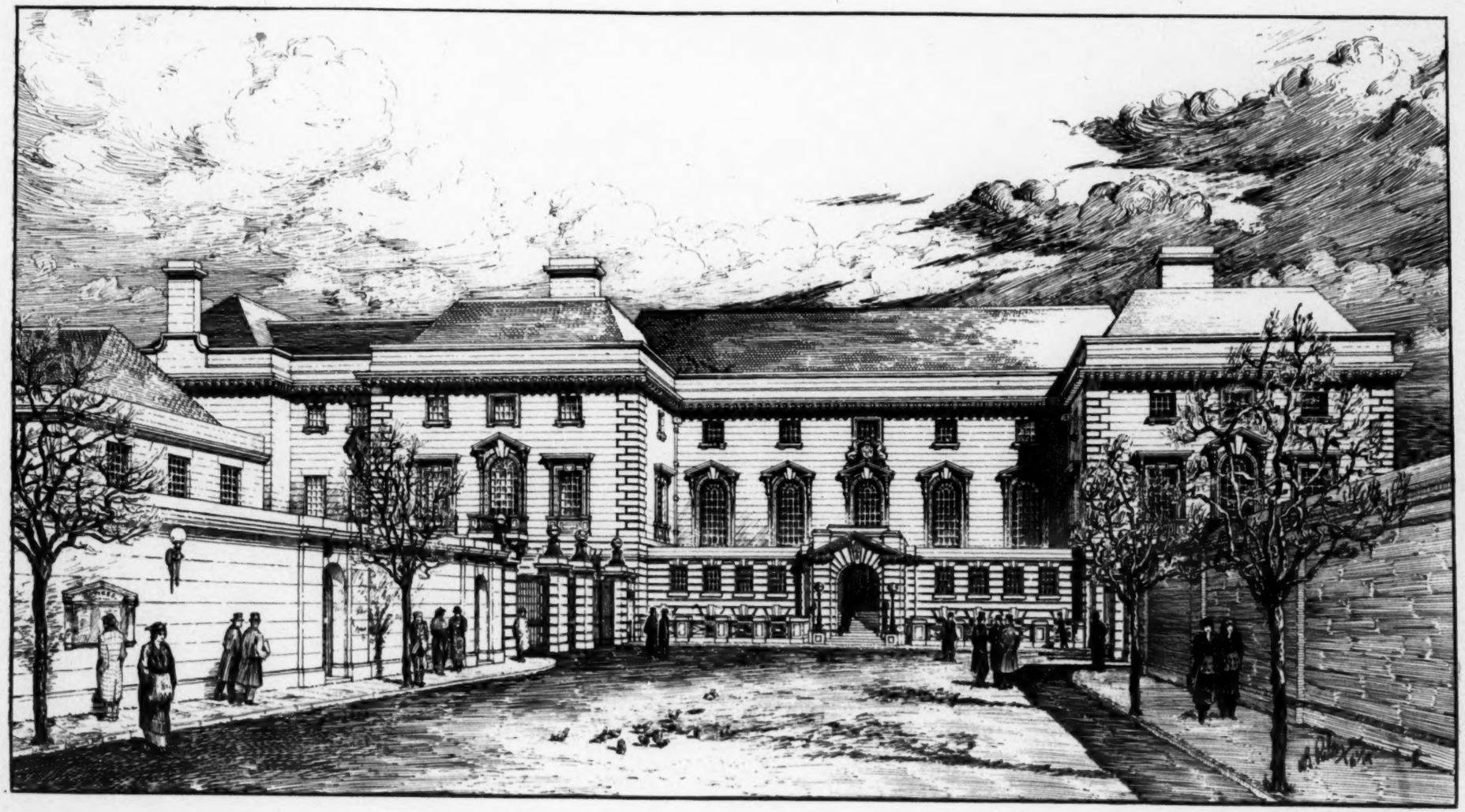
FIRST PREMIATED DESIGN, BY MR. P. H. TOPHAM.

THE BUILDER, JULY 24, 1914.

PROPOSED TOWN HALL BARNSLEY :

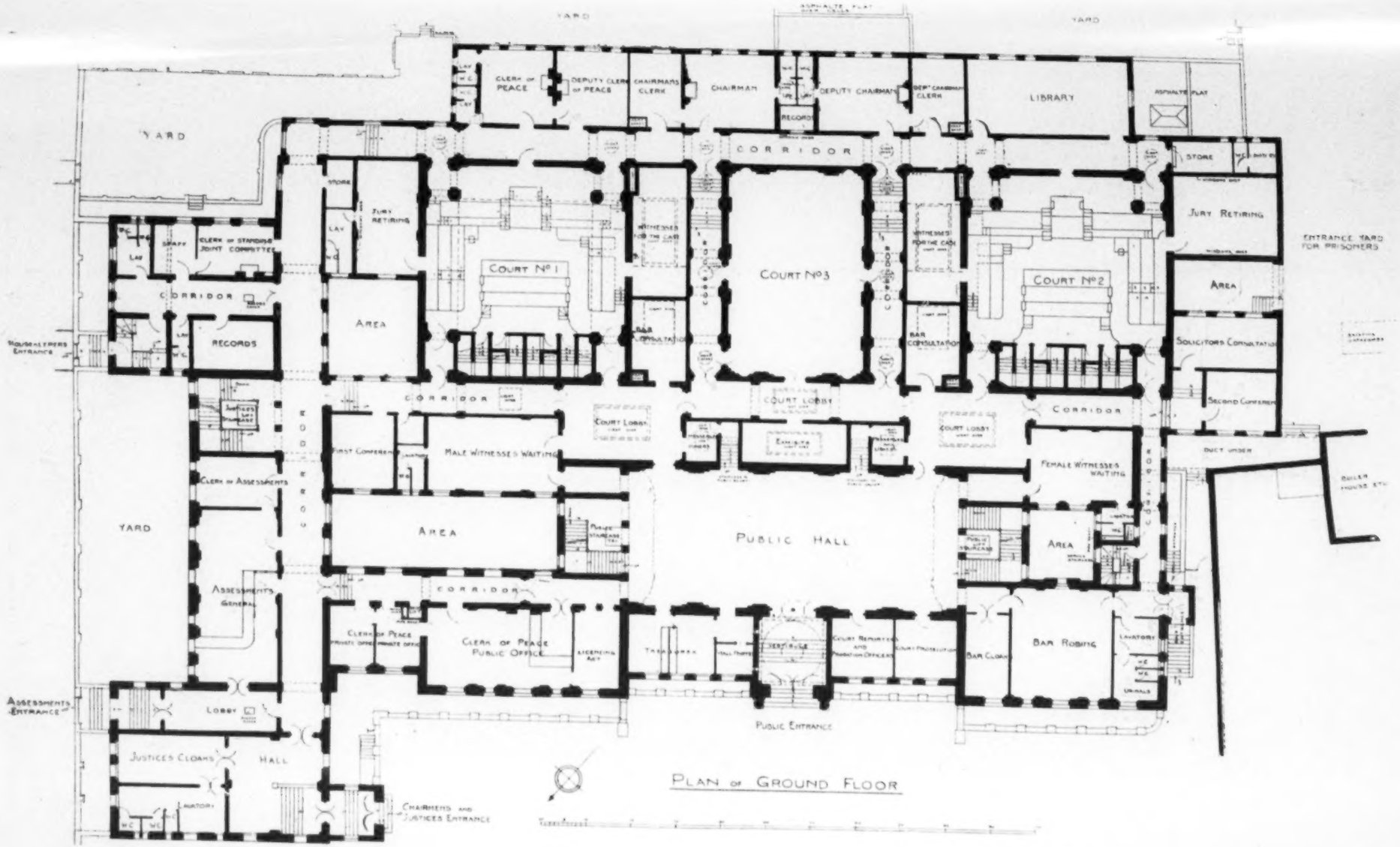


FIRST PREMIATED DESIGN, BY MR. P. H. TOPHAM.

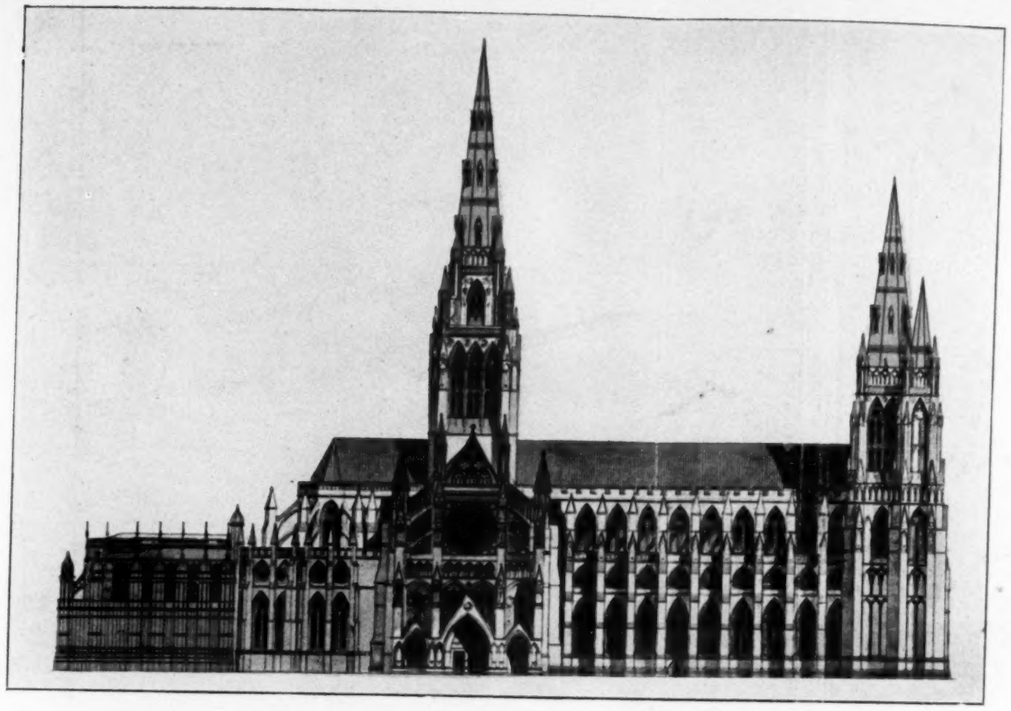


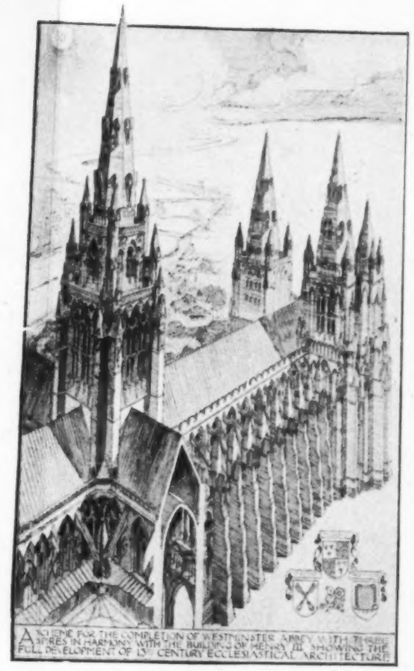
NEW SESSIONS HOUSE, NEWINGTON CAUSEWAY: MAIN FRONTAGE AND COURTYARD APPROACH.—Mr. W. E. Riley, F.R.I.B.A., Architect.

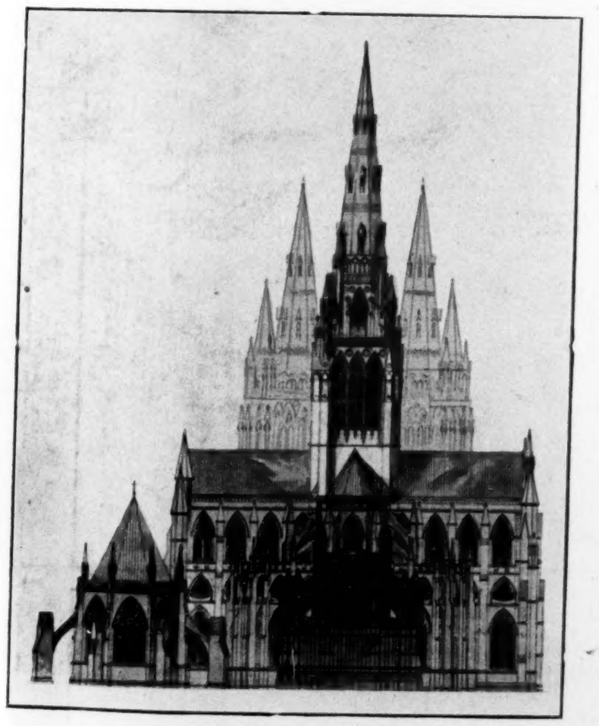
THE BUILDER, JULY 24, 1914.

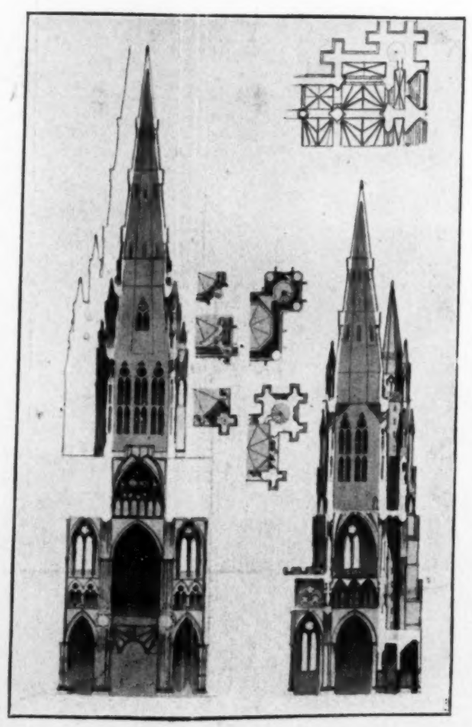


NEW SESSIONS HOUSE, NEWINGTON CAUSEWAY: COURT FLOOR PLAN.—Mr. W. E. Riley, F.R.I.B.A., Architect.



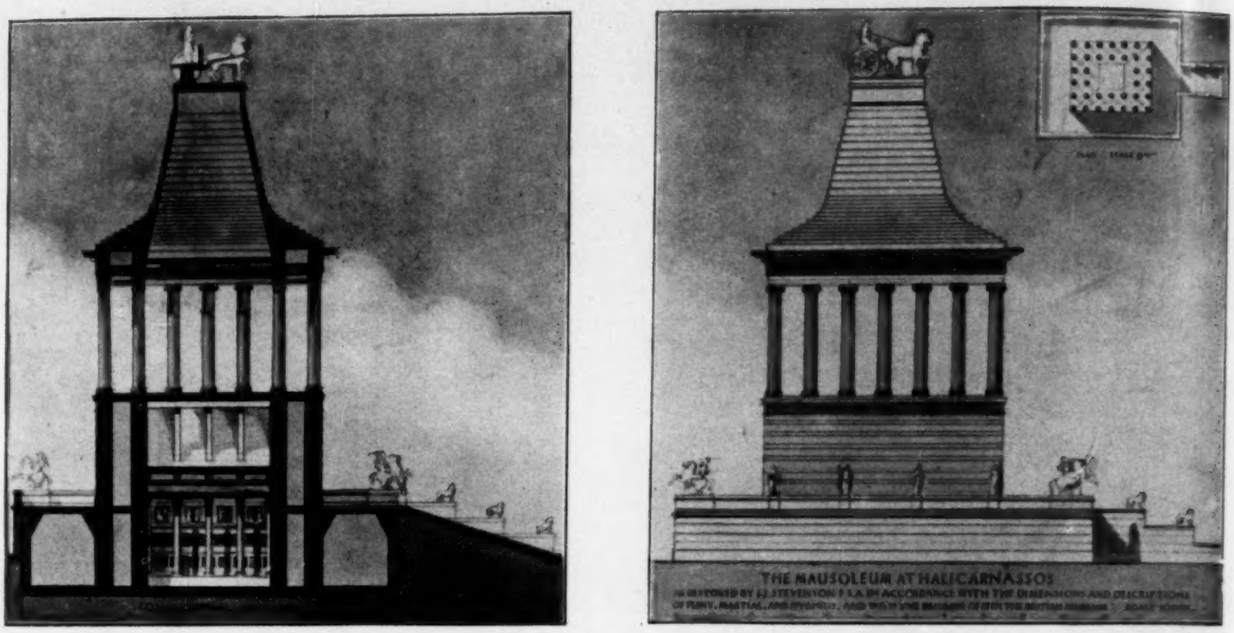

A SCHEME FOR THE COMPLETION OF WESTMINSTER ABBEY IN THE STYLE OF THE SERIES IN HARMONY WITH THE BUILDING OF HENRY III. SHOWING THE FULL DEVELOPMENT OF 13TH CENTURY ECCLESIASTICAL ARCHITECTURE



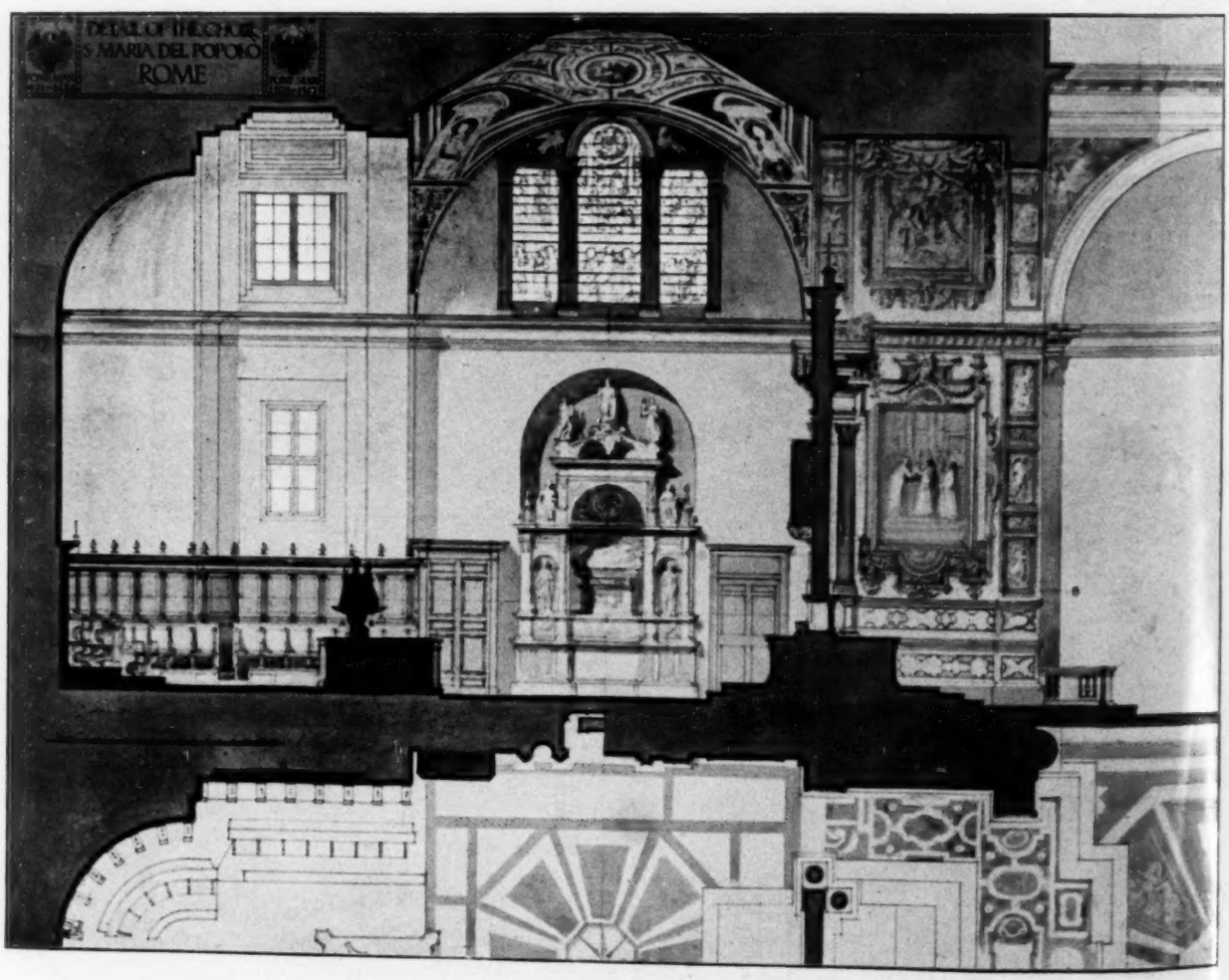


DESIGN FOR THE COMPLETION OF THE EXTERIOR OF WESTMINSTER ABBEY.—BY MR. F. K. POPE.

STUDENTS' WORK, ROYAL COLLEGE OF ART, SOUTH KENSINGTON.

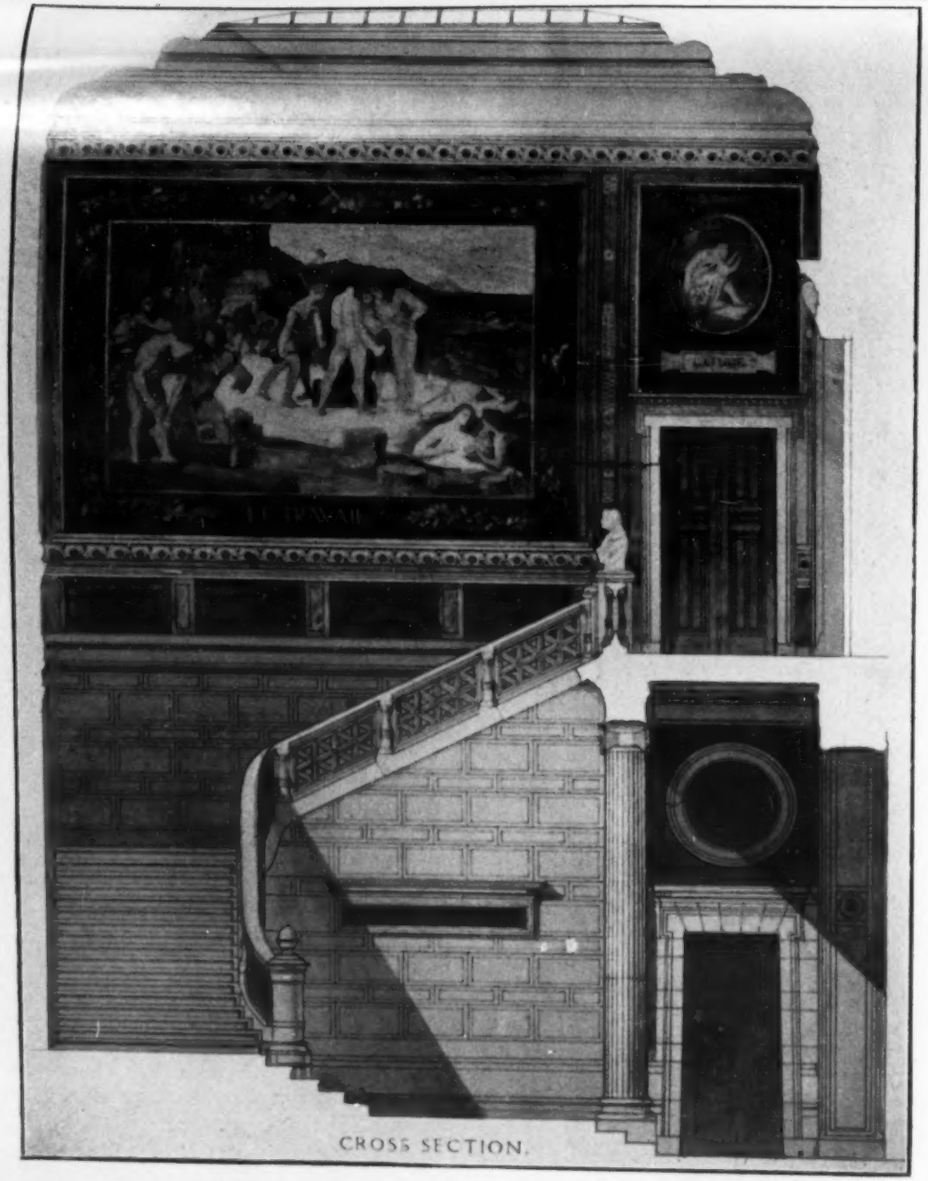


CONJECTURAL RESTORATION OF MAUSOLEUM AT HALICARNASSOS.—BY MR. W. T. GEORGE.

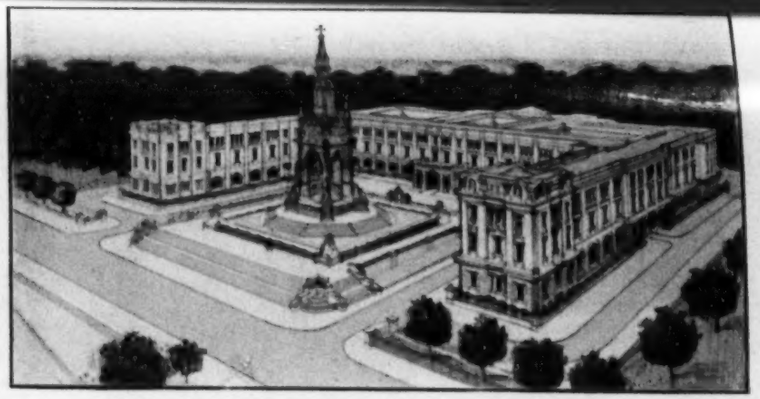


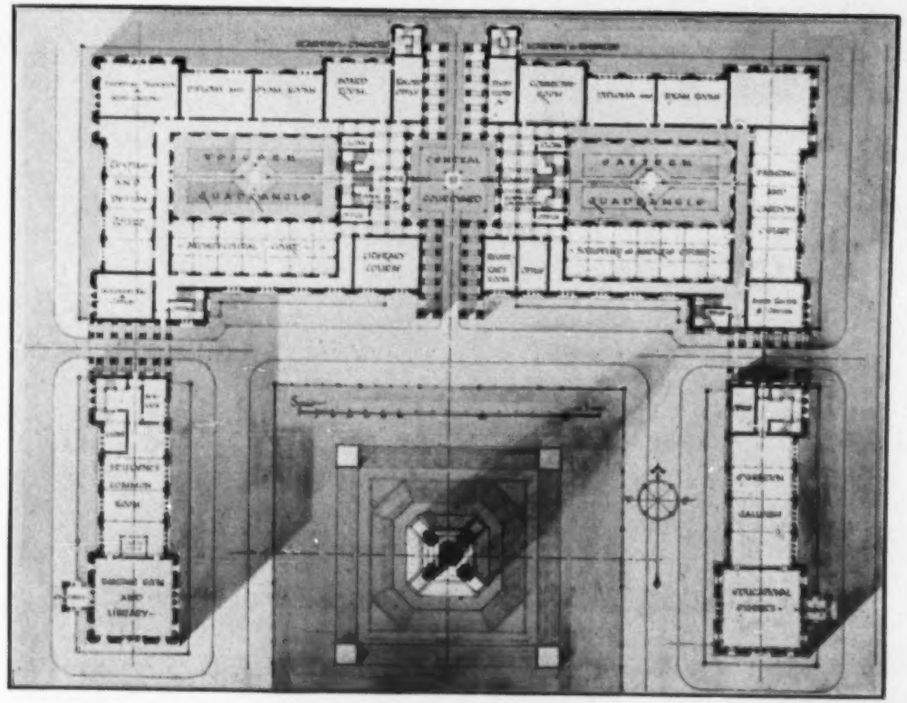
DETAIL OF CHOIR, S. MARIA DEL POPOLO, ROME.—BY MR. A. E. MARTIN.

STUDENTS' WORK, ROYAL COLLEGE OF ART, SOUTH KENSINGTON.



DETAIL OF STAIRCASE: MUSÉE DE PICARDIE, AMIENS.—BY MR. A. E. MARTIN.





DESIGN FOR A ROYAL COLLEGE OF ART.—BY MR. W. M. KEESEY.

STUDENTS' WORK, ROYAL COLLEGE OF ART, SOUTH KENSINGTON.

ARCHITECTURAL SCHOOLS SECTION.

AN ARCHITECT'S LETTERS TO A STUDENT:

SEVENTH LETTER.*

A Holiday Abroad.

I AM very glad to hear of your proposed holiday abroad and to be consulted as to where you should go. You add that time and money must be ruling factors in your decision. Well, these grim companions have dogged the footsteps of many before you, and have often sharpened proclivities which might otherwise have become entirely dormant. Italy is evidently out of the question with only a fortnight at your disposal and funds which are to be limited to some ten pounds. A long and expensive journey will only fill you with discontent at the little you have been able to achieve. Of course, as you say, you must see Paris, but, I think, not yet, for two reasons. Your knowledge of design is not at present sufficient to enable you to reap an adequate benefit or to study wisely the modern architecture of France, and Paris is not a place in which money can be made to go very far.

Your selection should depend a good deal upon the spirit of your going. It may be, of course, that you feel a longing for perfect freedom, a wish to lay down for a short time the pencil and merely gaze at the great things others have created. To let your eyes rest in effortless wonder on the ecclesiastical creations of mediæval enthusiasm in Rouen, Caen, or Bayeux, or even to flee further from instruction and to view merely from the artist's outlook the more nebulous outlines of the castles and châteaux on the Rhine. Let your holiday primarily be a holiday; it is an investment the dividends from which will be fully paid in a sense of refreshment on your return. But if, as I hope, your love of architecture and art will make them essential holiday companions, you can spend a more profitable and less costly time in a somewhat different manner by visiting not more than two or three places and sketching, perhaps also measuring, some of the old work found therein. Whether it be the quaint beauties of St. Valerie or the narrow streets of St. Malo, the quays of Bruges, the quiet squares of Louvain, or the castle gate of Leyden does not much matter if you go, sketch-book in hand, prepared to deal with "lumps" of general effect, as an agreeable contrast to attractive bits of detail.

One of the commonest errors into which the architectural novice falls is an attempt to sketch comparatively elaborate buildings *in toto*. What could be more tedious and dispiriting than the indifferent reproduction of the façade of a cathedral or large Renaissance building? Sketch by all means to improve your drawing, but sketch also things which may be useful in your work. Much of such drawing is easy, and its results are, therefore, an encouragement; it is full of varieties and therefore brings no tedium. Look at that circular window-head with the jolly bit of plaster ornament on each side of it! That is a thing you might work into a small country house; it is something you have never seen before; a conception which would at once divorce your work from the taint of the jerry-builder. Sketch it, note the materials which compose it, and the charm, if any, which it derives from its surroundings. You cannot perhaps measure it up, but a record of its approximate height and the distance of the point of view from which you became enamoured of it are at your disposal. Here is a quaint spandril, there a curly iron brace on a wall, against the skyline a little cupola so simple that there seems to be nothing in it. These are the things to take away. The simplest things are often the most beautiful and not infrequently the most dignified; they are also the most economical; and wealthy is the man who has learnt to get charm out of simple materials without elaboration. Who is going to ask you to reproduce the Hôtel de Ville across the road? Sketch a bay of it if you will, measure the proportions of its plinths and columns, place on your open page the outline of the old fanlight, but not more. If the whole composition strikes you as effective, by all means preserve such a memory by buying a photograph of it.

Perhaps you rebel at length; bits are but bits, and you want something to show on your return. Well, you shall have a change, and study the grouping of masses. What more pleasing vista than the old cobbled way in which you stand? Look how the irregular fronts of the houses, foreshortened into a delightful chaos, cast their grey shadows over the street! What a wealth of contrast lies in the black depths of that dilapidated archway, and how boldly the tower of St. Pierre rises out of the mass behind in the purple distance! This is recreation, but instructive recreation if you weigh your light and shade, the masses, and the setting of your picture.

Beautiful visual effects are a matter of judicious contrasts in which colour and light and shade are knit together by the link of texture. Wise you will be in these early tours to set aside the temptations of the brush for the more prosaic, but more truthful, line of the pencil, and your colour will be recorded merely as written notes upon your sketches; but your notes are a part of any successful reproduction of the details you record. It is a good plan to make two sketches, one for general effect in which you may revel in the shadows stored up in a 2 or 3B pencil, the other, a line drawing to a larger scale, dimensioned as far as may be, possibly still in perspective, but amplified by plan and section, for it seems so easy at the time to remember every detail and in reality—how often I have experienced it!—it is so intensely disappointing to find the essentials which just made the charm are, for purposes of use, missing from your sketch when you try to bring it into requisition, generally only when the occasion of its making is but a distant memory.

Don't be disconcerted by the curious onlooker or the street urchin, and let me give you a reflection given to me by an old friend when, in my young days, shyness often made me beat a hasty retreat with my work but half completed.

"If," said he, "anyone stops to watch my scribbles I am quite sure that he cannot do as well himself, and therefore I feel encouraged by the reasonable assumption that he does not regard me as the very second-rate artist I undoubtedly am."

A story is told of a friend of Professor Sedgwick, the geologist, who, writing to congratulate him on the birth of a son, said, "Give him my greetings and tell him always to label his specimens." In the same spirit I would say, always record the date and exact locality of your sketches, which may prove of great use on subsequent visits, enable you to obtain, if needs be, missing information, and to help others who come after you.

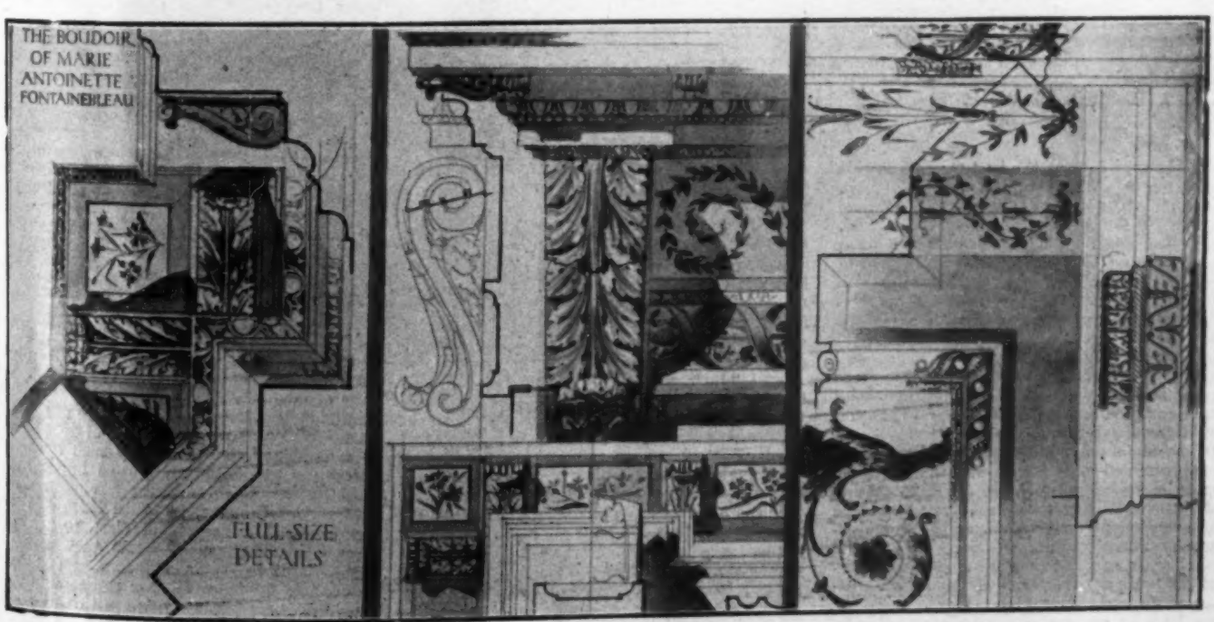
EIGHTH LETTER.

On Specification.

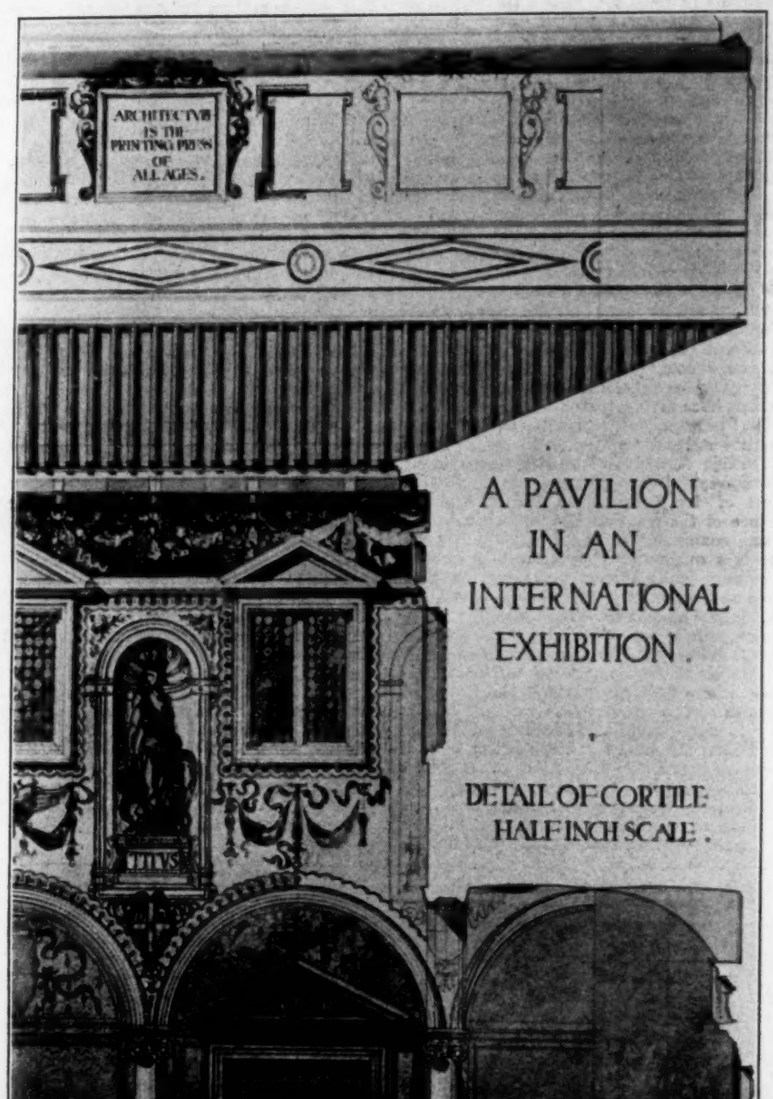
This is a gratuitous letter for which I apologise before I set out upon my subject. It is born of an incidental sneer in your last communication in which you intimated that specifications were not worth worrying about, because they could always be drawn by the quantity surveyor, and moreover were seldom looked at by the builder. You evidently approach this subject with your mind—to drop into appropriate metaphor—very much in winding, and I am going to endeavour to knock you to pieces and dress you down again.

It is true that in large works the surveyor very commonly writes up the specification from notes, and when an architect has employed the same surveyor for some years, and he is therefore thoroughly conversant with the architect's views and style, the practice may be justifiable.

* For previous letters see our issues for March 27 and April 24 last.



Students' Work, Royal College of Art, South Kensington: Studies at Fontainebleau, by Mr. A. E. Martin.


ARCHITECTVRE IS THE PRINTING PRESS OF ALL AGES.
A PAVILION IN AN INTERNATIONAL EXHIBITION.
DETAIL OF CORTILE HALF INCH SCALE.

Students' Work, Royal College of Art, South Kensington: Design by Mr. J. H. Farrar.

Undoubtedly, however, the best man to do this work is the man who made the pencil drawings. It is equally true that a contractor who has done much work for an architect has little need, given good drawings, to trouble himself much about the greater part of the document in question. These are the conditions which probably dominate your present office. But let us imagine you connected with a smaller class of work or to have received a commission—a likely one enough as a beginning—for a small house to cost, say, £700. Your client is anxious that a couple of builders in his neighbourhood should compete, and perhaps suggests that you should name two more.

It is probable that in such a case there would be no quantities, and the estimate therefore would be based entirely on the specification and drawings. For the former you would be solely dependent on yourself, as the draughtsman, by whom you might be assisted, would probably be unable to write it. The specification in such a case forms a most important document, and, if ambiguous or incomplete, may lead to endless correspondence, dissatisfaction, bills for extras, or even litigation.

This document has several objects:—It supplements the contract as a legal safeguard; it defines the nature and quality of the materials to be employed; it gives (apart from quantities) the only intimation of a great number of items required, often including important provisional amounts; it also contains any general information relative to the work which is at all likely to enable the estimator to get into touch with its circumstances and surroundings, which, it should always be remembered, will be unknown, or at least not equally known to the competitors.

To tender for work without quantities, even though that work be small, requires considerable time and labour, and it should be your first endeavour to put your competitors on a level footing. How mean should we consider a starter who allowed a man in a hundred yards race to place his foot over the line, and how much it may mean to one who has to compete against the "local man" to know or not to know, for example, that your building is at the top of a steep hill, that the soil contains usable gravel, that you strongly object to the local bricks, or that the employer will only allow access to the site by a circuitous route!

There is a prevalent impression that a long specification means a long figure, but I believe this to be quite erroneous, and have more than once interrogated reputable builders on the point, when preference for a detailed specification has invariably been expressed. "We can see when an architect's taken pains and knows what he wants," one man said to me. "If things were ambiguous, what would you do, sir?" he added. "Cover myself," I replied, smiling. "So do I, sir," rejoined my friend, "and often I've lost a job through it, but there's another way that suits some of 'em a deal better."

Verbosity, however, is no help to a specification, and a highly pretentious style, coupled with conditions of unnecessary stringency, may certainly help to increase an estimate. It is, moreover, wholly unnecessary to describe what is already shown on the drawings, though, since items are more readily missed on drawings than on written pages, it is often a kindness to admonish the estimator to refer to his drawings. The repetition of any matter in a specification is unpardonable, and will generally lead to the item, if of an assessable nature, being priced twice over. As to the order to be adopted, an arrangement by trades is the best, but is not always possible; in alterations and repairs, for example, much confusion might result from an attempt at such a classification. The next best thing is to specify the work as completely as possible in local sections, and as far as may be in the order in which it is to be done, which is often a great help both to the estimator and foreman. Finally, it should be borne in mind that this wordy document will be used in the execution of the work by men of but moderate education; concise and simple diction will therefore do much to prevent misunderstandings. Every man, in setting out upon this task, should hang up in his mind this motto:—"The worry may be great, but the worry of questions and letters is greater, while that of errors and extras is greatest.

Until you have gained some experience, it is quite impossible to write a specification without a model to guide you and to prevent omissions, and you will find it an excellent plan to make a collection of headings of the items in each trade, adding to them as your knowledge and field of work grows. Do not at first attempt to follow the practice of the more experienced by writing up your document from ¼-in. scale drawings. It may be that your client will change his mind on many points after you have expended much time and labour on details, but, never mind, the experience is all useful, and my strong advice is that you should work out your ¼-in. details, if not also a few important full sizes, before you make your literary effort. You will find this an immense help in preventing variations; indeed even the most experienced can never wholly visualise all the intricacies of a building without making some details. Half-inch that innocent-looking ¼-in. scale section. How its appendages grow! Here skirtings, cornices, and architraves demand recognition; there your eaves construction requires another quite unexpected wall plate; again the wall linings and mouldings for your staircase have taken upon themselves quite new and inflated dimensions.

These are the kind of things that produce extras which it would be wholly unreasonable to ever lay before your client.

I am told that it is becoming a very common practice to put in specifications or quantities comparatively large provisional sums for subcontractors. My letter is already too long, and you will not need to consider this yet awhile, so I will reserve the matter for a future epistle.

ARCHITECTURAL STUDIES:

THE PALAIS DE JUSTICE, BRUSSELS.

In all forms of art there will always be found examples which the critic must explain irrespective of common tendencies—realisations of the mind which cannot be assigned to any definite position along a recognised line of development. The tendency represented by such a line may suddenly encounter an abrupt break by the creation of a form entirely unsuspected in antecedent thought, in which there has been reversion, in a kind of atavism, to far earlier forms for inspiration—forms that have not handed down their influence. In such an exception we must see the restlessness of the creative genius, not content with the common impulses towards expression, and searching for a new *motif* in unexploited fields for a new medium.

In architecture we have a striking example of this in the Palais de Justice at Brussels. To understand such a building we must endeavour to consider it outside the criticism that an unbroken line of architectural tradition has evolved. Hardly any other building, certainly none of modern times, or western (as opposed to eastern) origin, calls so imperatively for a subjective interpretation, isolated as it is from our architectural thought. Such an isolation suggests, in fact, the necessity of translating this idea of architecture into a form of art that might help us to understand it, in which its architectural being might become a reality to be reasoned with. Till then, it remains something for conjecture; till then it must fail to adjust itself to our accepted notions of what architecture is; and it is equally impossible so to adjust all that the mind has accepted as representative and distinctive that it may embrace such a creation. The great examples of architecture are the most easily explained and understood, because they have been evolved from direct tendencies. Our own St. Paul's, for supreme instance, does not stand on the borderland of any unexplored field of architectural expression, but is the culmination of a continuous development. It embodies no architectural phenomena that we are not in a position to appreciate, nothing which our criticism is not able to explain. That is why we understand it and why we fail to understand a building like the Palais de Justice, because there our criticism fails us. Joseph Poelaert takes us back with a shock across a vast, unrealised gap to the possibilities of Mesopotamian building, possibilities never hardly more than dimly guessed from what we have known of such an architecture. Had the ruin of some such building as Poelaert's masterpiece been discovered on the Assyrian plain we should have experienced nothing more than a reasonable surprise at so much further evidence of the stupendous character of the works of these mighty builders of the past. But it is far different when we find an actual creation of this very nature entering into the scheme of our own civilisation to proceed to the appreciation of the intrinsic merit of so marked a deviation from established ideas. It is not merely a question of style, of the formation of a new style, but rather a different understanding of what architecture can legitimately attempt, the refusal to accept any limits to its horizon, and a certain interpenetration of spheres of thought only completely to be exhausted by literature, music, philosophy. . . . .

To take as a *motif* a building the beauty and interest of which lie for us in uniqueness of character, outside our own architectural sphere —a building, say, like the Taj Mehal—must seriously affect the architectural tradition of a nation; and in a measure the Palais de Justice, based as it seems to be on some lost masterpiece of Assyria, must be regarded as violating an essential canon, and, in so doing, as achieving a daring that is denied greater works—greater, that is, in so far as they conform to what is accepted as right.

These speculations are prompted by a dimly-recalled impression of one's actual first view of the structure, which photographs or drawings hardly seem adequate to convey. Photographs seldom prepare one for the precise effect produced by a building, or substantiate the effect made, and the Palais de Justice is pre-eminently a building we should hesitate to include within the scope of an architectural drawing. The first impression is one of numbness, as though one has been confronted with some unmeasurable object beyond the sphere of one's emotions, some unknown vastness suddenly all but known. How correlate that to our conscious appreciation of an architecture which has never seemed to be beyond us, or anything but a part of our ideas! To convey anything of such an architectural personality, as we might term it, it would seem to be necessary to ignore deliberately all that other forms of building may express; to be concerned with the Palais de Justice and that only; to be absorbed by the subject as a great portrait-painter is absorbed in his. Such an interpretation might provide us with that translation of a purely architectural sphere which we have suggested is essential to the proper understanding of the building, where the artist's success would be measured by the degree in which we are led to forget architecture as such and indulge in indefinite musings called up out of the past—vague expressions of still vaguer things. The emotions aroused by architecture are due fundamentally to tangled associations of time and place; the Palace of Justice of Poelaert seems to suggest rather an intangible affinity with something beyond our dimensions. What we should consider elsewhere as scale here becomes non-commensurate breadth when the eye makes a futile attempt to take in comprehensively the overwhelming height. The minute concentration in the multi-columned base dissolves into an Assyrian, Babylonian echo, in which the sensations of awe and antipathy never quite cease from conflict. Here are problems indeed in architectural perspective.

The architecture achieved here, whatever it be, is such as to remove it from all else; the building is one that must ever fail to come into relation with its surroundings or to express the inherent nature of a city. It is an estranged building, which, we feel, can never exercise that tutelary genius over the Rue de la Régence, the Rue des Minimes, or Place Poelaert, which the precincts of St. Paul's owe to Wren's genius. And it is not to be expected that sentiments akin to those we feel for St. Paul's are to be evoked for Belgians by this stupendous achievement of Poelaert's. Has any other European capital a building so estranged?

Of the Palais de Justice a French critic has written illuminatingly:—

"It rises above the town, its gigantic masses piled up to the height of one of the hills with which the soil of Brussels is studded, and, seen from the surrounding country, appears as the advance-guard of some city of Babylon. In fact, it dominates the panorama so completely that one sees nothing but it at a certain distance, and the houses which unfold themselves at its foot are diminished to such an extent as to become nothing more than the dwellings of a simple, straggling, market-town. . . . The Palais de Justice, indeed, whether it be studied at a distance, across the rain-charged mists, or under brilliant sunshine, or whether one examines it closely, forms, with its titan-like entablature surmounted by pillars, hollowed with porticos, notched with staircases, an architecture one might believe to have been revealed in the clouds of an apotheosis."

Of a building of this nature mere dimensions tell us little. From the low-level pavement on the north-west the summit of the dome rises some 30 ft. higher than the top of the cross on St. Paul's, but the effect is of an even much greater height. The superimposed platforms fail the eye, which has to carry depths, gauge heights, jump receding planes, in such bewildering complexity, that by the time it arrives at the four colossal statues that brood over the city around the final colonnade below the dome it is out of focus.

Looking up the Rue de la Régence, on the axis of which is placed the great entrance portico, one gets the most easily negotiable and yet the most remarkable view of the building. But it seems actually but little nearer to one's understanding than the distant mark set over Brussels, like some fantastic crown, from the Lion Mound at Waterloo.

The great portico is 66 ft. wide, 114 ft. high; the colonnades on either side are three columns

Students' Work, Royal College of Art, South Kensington: Design for a Baptistery, with Decoration, by Mr. W. S. Peters.

deep, set with great staircases; and deep within, a great bronze door, for which amazing figures might be given, opens on to a large vestibule which leads directly to the Salle des Pas-Perdus, the most remarkable feature of the plan, and of which its rather fanciful nomenclature tells us much more than could mere figures. Suffice it to say that there is an area something like 300 ft. by 130 ft., and above is 300 ft. of space below the great dome. From the upper floors all this appears still more formidable—one gazes into vacuity.

Ignoring some detail, it is not necessary to do more than refer to ancient Assyria for the prototype of the Palais de Justice, but when we come to contrast different conditions certain criticisms become inevitable. We have a building in which portico and colonnade seem to alternate, and in which at every fresh superimposition there is fresh opportunity for deep shadow. Shadow is distributed throughout the entire building as though it had been the architect's *motif*. Such a *motif* could well find expression on a southern plain, in a building exposed to a relentless glare, where the deeply-recessed porch and narrow window-opening have a real significance. It is perhaps hardly realised at times how small an opening will suffice to light an interior if there be brilliant sunlight to reckon with; southern buildings need verily to be "stopped down" like the lens of a camera exposed to an intense light, and with such conditions it is hardly possible to provide too much shade. But how different such a tendency becomes in the north! In that apotheosis suggested in the criticism quoted above it might be assumed that the building were but duly protected from the light of all the heavens; but coming down to earth, to the not over-relieved greyness of the Belgian capital, we are forced to the conclusion that the interior is seriously darkened—an architectural sacrifice in which expressions lose their true meaning and point unextenuatingly to a bad architectural economy.

It is hardly to be wondered at that the architect of the Palais de Justice did not live to see his gigantic conception completed; the wonder is that it should ever have been completed. The building was commenced in 1866, and inaugurated in 1883. Poelaert died in 1879 at the age of sixty-two. His other work in Brussels includes the Colonne du Congrès, the Church of Sainte Catherine, and the Théâtre Royal de la Monnaie; but we cannot point to any work of his that can be said to give any anticipation of what his genius was eventually to evolve.

In the projection and completion of an enterprise like the building of the Palais de Justice there is food for much comment, and in this matter it is impossible to ignore the influence of the late King Leopold. Some profess to see in the building the personification of an autocrat, a symbol, even, of oppression; certainly it is easy to perceive the expression of a will that would recognise no obstacle to the fulfilment of a thing once instigated. And it is just as certain that without such a power behind him no architect could ever have hoped to succeed in so gigantic a project as this. No mere government could stand him in the same need. King Leopold's approval of the plans was not only sufficient to carry the building through its preliminary stages, but was a guarantee that those plans would be completed; no one perhaps realised to the full all that Poelaert had conceived, and the building must have assumed a more and more stupendous character to those who had to find the enormous sums which it swallowed up. The more colossal in its development the edifice that was dawning upon them, the more inevitable was the expenditure. Poelaert had opportunities of realising his ambitions that have been granted to few in modern times, and in this particular of its very building the Palais de Justice provides another parallel with the buildings of pre-classical times. The result is that Brussels is possessed of a piece of monumental architecture which easily eclipses anything now standing. It is a lasting monument to the genius of its architect; but it is something more. We shall see not only oppression in it. Whatever its architecture may come to be adjudged it will represent an horizon reflecting the largeness of spirit, the grasp of big things, which characterised the ruler under whom the Palais de Justice was built. Great architecture, great art in any form, calls not only for great artists, but for great patrons, and there is a scale of mind that is explained or misunderstood according to whether we make or do not make certain allowances for tendencies which, in the case of anything petty or mean, would be adjudged, and rightly so, as distortions and shortcomings. Without her Emperors the grandeur and scale of Rome were not.

THE FIVE ORDERS OF ARCHITECTS.

WE were looking round a second-hand bookshop some time ago and discovered a mutilated volume, the date of which we could not discover, but which seemed to be a compendium on the whole duty of the architect, and contained the usual dogmatic and oracular statements as to architecture which were characteristic of books of the eighteenth century. In it we came across the following extract, which may be of interest to our readers:—

"As there be five Orders of Architecture—namely, the Tuscan, Dorick, Ionick, Corinthian, and Composite, of which all elegant structures be composed or ornamented—so likewise are there five orders or different kinds of architects, each differing from one another, yet all of them are paid or recompensed in like manner by those requiring their services, and the payment is at the rate of £5 per centum on the moneys expended on the erection of the structures devised by the architects.

And the *First Order of Architects* is that called the Art Architect, who hath much conceit of his calling. He is oft-times dressed in curious fashion in a coat of velvet, and weareth a beauteous tie and a soft hat. His hair falleth over his forehead in curls and quaintly toucheth his collar. Those who employ him fear him, for he who crosseth his fancy he treateth as a felon or else sheddeth salt and bitter tears. His devices for buildings are oft-times exceeding quaint, and at times inconvenient to those who occupy the dwellings he deviseth. Yet is there thought and meaning abundant in all. He deviseth hearts upon doors and chimney-corners, the fires whereof oft-times smoke, yet their appearance is exceeding quaint and primitive. He quarrelleth with the decrees of the local surveyor, as no such an one existed in the time of the Heptarchy. The latches upon his doors one pulleth with a bootlace, and he thinketh of a pigeon-cot and sundial even in the forecourt of a City office. Thy garden space he filleth with clipped yews and lily ponds, and the pegs for thy washing will he design to teach thy maidservant culture.

Now, the *Second Order of Architects* is that called Practical, and none would know them from stockbrokers by outward seeming. Unlike the architect of the first order, he of the second order buyeth thy chimney-pieces ready-made and knoweth where thy wife wantyth the draining-board of a sink that her maid may place unwashed crockery thereon without hurt. He falleth in readily with thy wishes, saying this is the whole duty of one of his calling. Yet mayhap thou wilt discover the dwellings he deviseth are exceeding commonplace and like to those raised by the builder without aid, and thou mayest find him more practical in word than in deed.

The *Third Order of Architects* is the Competitive Architect, and the manner of his working is altogether different from that of the architect of the first and second order. For whereas these are chiefly concerned with the devising of dwellings, the Competitive Architect's brain is even like unto a seething caldron of mighty thoughts. He draweth out schemes for public buildings which are not straightway given unto him, but only if they have been matched against many others and adjudged better than they are. He burneth the midnight lamp, and sweat rolls down his forehead even on to the paper whereon he worketh. He is balanced in the scales of hope and of fear, and his excitements are many. For, as Holy Writ hath it, many are called but few chosen, and oft-times the architect of the third order cannot discharge the reckoning of his washerwoman. Yet fixeth he his eyes on the stars and his mind is filled with great thoughts. When he succeeds he oft-times watcheth princes lay the corner-stone of his buildings while many applaud, and his name waxeth great in the land.

Now, the *Fourth Order of Architects* men call Speculative, and very different is their method. For the first three orders have no thought of the wherewithal from which payment must come, but wait in their chambers for the knock of the client. But those of the fourth order see a fair piece of land and show those who desire money how by building thereon they can make more. Yea, balance sheets are the weapons wherewith they fight, and they will even tell one where money can be had at interest if more can be made by borrowing thereof. As other men, some among them are good and others bad, who lead the unwary into pitfalls and grow fat with the five per centum on what has been expended. Yet the fourth order has its uses, nor may man condemn them without judgment.

The *Fifth Order of Architects* is that called Official, and hath this difference from all others. For whereas the four orders we have mentioned live even upon five per centum or starve because it is lacking, the Official order is payed even by salary by public bodies who employ them continuously. So care sitteth not beside them, but neither does the hope of great rewards brighten their years. And have they the bitterness spoken of in Holy Writ of serving masters manifold, who are appointed not because of their knowledge of Art, but simply by the pleasure of the ratepayer. And they get them grey hairs and troubles attending many committee meetings, nor are those who serve many gratefully treated. And, as among the other orders, some are cunning and fashion great devices, while others have not the skill of the artist.

And the aforesaid we have mentioned are the five Orders of Architects who use the five Orders of Architecture that the children of man may have habitations, for, since mankind must increase and multiply, so must they have buildings that their bodies be not destroyed by the rigour of the elements."

A SECOND ATELIER.

The Beaux-Arts Committee, taking into consideration the fact that the First Atelier now has its full complement of students, and feeling that the success of the First Atelier will be greatly enhanced and the objects of the Committee further promoted by the affording of opportunities for emulation and competition on similar lines, have decided to take immediate steps for the opening of a Second Atelier in London. The Committee are in negotiation for premises, and hope shortly to make some more definite announcement regarding the details of the scheme. In the meantime, those who wish for further information regarding this development should communicate with Mr. Adrian Berrington at the First Atelier, 16, Wells-mews, Oxford-street, W., or of the Hon. Secretary of the Beaux-Arts Committee, at 28, Bedford-square, W.C.

THE ARCHITECTURAL ASSOCIATION.

On the 17th inst. Mr. Herbert Baker presented to the students of the Architectural Association Schools the prizes for work during the past session. The list of prize-winners appears on p. 95. Mr. H. Baker said he was glad to see the education given had mainly a classical basis. Good architecture was evolved out of practical considerations; it should have a sentiment to inspire it, but it was not based on symbolism and sentiment. We had much to learn from other countries, but should not lose sight of the English characteristics of quiet restraint and simplicity.

SUMMER SCHOOL OF TOWN PLANNING.

Mr. Herbert Samuel, President of the Local Government Board, has promised to give the inaugural address to the members of the Summer School of Town Planning on Monday evening, August 3. The course will be held in the School of Architecture at University College from August 3 to 15. Besides the courses of lectures by the leading English town-planners, special lectures are arranged by well-known American and German professors of the subject. This Summer School initiates the study of town planning at the University of London.

SCOTTISH MEMORIAL TO KING EDWARD.

The executive section of the Scottish National Committee for a memorial to King Edward VII. have finally approved of an amended plan prepared by Mr. G. Washington Browne, R.S.A., for two ornamental gateways in the forecourt of Holyrood Palace, together with a statue of King Edward. The sculptural portion of the design will be entrusted, we gather, to Mr. Albert H. Hodge.

THE BUILDING TRADE.

EMPLOYERS' PROBLEMS IN NEW ZEALAND.

ACCORDING to the eleventh annual Report of the New Zealand Employers' Federation, the past year has been a most trying one from the industrial point of view.

From information in the possession of the Federation it is known that the shortage of labour in some of the leading industries is having a serious effect upon trade. In the textile trades employers cannot maintain even a normal output, much less increase it, because of the scarcity of skilled and juvenile labour. In the fruit-canning and jam trades hands are unprocurable even to perform the most trifling duties. The dressmaking trade is similarly situated.

Employers complain that the Government affords little or no assistance in the direction of securing the necessary labour from abroad.

It is also complained that further legislative restrictions are being constantly imposed or put forward for imposition upon industry, and many of the projects have had to be opposed.

In spite of the Arbitration Act, various strikes have occurred, and in some cases were accompanied by rioting and disorder. In all there were thirty-five strikes for the year ending March, 1913, making a total of ninety-eight for the nineteen years during which the Act has been in operation. The number of industrial disputes last year was the largest on record. The Conciliation Commissioners have dealt with 118 disputes, resulting in ninety-eight awards, twenty-four still awaiting settlement.

At March 31 last New Zealand employers were under the necessity of observing 399 awards and industrial agreements, as well as having to know and observe the provisions of at least ten more or less complicated labour enactments.

Well may the reporters exclaim: "Truly this country is labour legislative ridden, and it is little wonder that employers are crying 'Halt!' and pleading for a rest from further restrictions."

The following resolutions in regard to industrial disputes tell their own tale:—

"That this meeting of the New Zealand Employers' Federation deeply deplores the number of strikes that have taken place in New Zealand during the past year, and to note the increasing lawlessness connected with them, and feels that, unless strong measures are taken by the Government to secure law and order, life and property will not be safe. The meeting is strongly of the opinion that employers should not in future enter into any agreements with the labour unions unless under the Industrial Conciliation and Arbitration Act.

That a clause be inserted in the Industrial Conciliation and Arbitration Act providing that all unions be responsible for the actions of their officers.

That plaintiff may recover costs against the Labour Department in the case of an unsuccessful prosecution for breach of award.

That awards do not come into force until after they have been printed and circulated by the Government Printer.

That it be a recommendation to the Parliamentary Committee to make representation to the Labour Department that it be made incumbent upon the Inspector of Awards or his deputy, on receiving complaint of breach of award, to obtain from the informant a statutory declaration in support of the information.

The peculiar geographical position of New Zealand makes it imperative that no stoppage in land or water transit shall be permitted to take place, and this Federation pledges itself to use its utmost endeavour to secure the co-operation of the Shipowners, Farmers' Unions, Sheepowners' Associations, and Chambers of Commerce to provide ways and means by which all systems of transit shall be adequately maintained, and for this purpose it is desirable to arrange for a roll of names of persons in every district who are willing to assist in maintaining free and uninterrupted continuance of every form of transit.

That this Conference of Employers' Federation adjourn and proceed as a deputation to the Prime Minister to ask for police protection for the labour we are prepared to guarantee, and that the Corporation of Wellington, the Strike Committee, Sheepowners' and Farmers' Unions and Chambers of Commerce be asked to accompany this deputation."

PRESENT POSITION OF THE LONDON DISPUTE.

THE vote taken by the National Federation of Building Trades Employers in connection with this dispute was returnable yesterday (Thursday). No communication has yet been made to the Press, but the result is expected to be in favour of the declaration of a national lock-out in support of the London employers.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE Building Act Committee of the London County Council have consented to the following applications under the London Building Acts, 1894 to 1909:—

Lines of Frontage and Projections.

Bow and Bromley.—Erection of porches to six houses on the south-eastern side of Ridgdale-street, Bow (Messrs. E. Evans & Sons for Mr. A. Braunstein).

Chelsea.—Erection of bay windows to two houses on the northern side of Camera-square, Chelsea, and the erection of wooden pilasters and hoods at the entrance doorways (Messrs. Elms & Jupp).

Marylebone, East.—Erection of oriel windows at the rear of No. 5, Ulster-terrace, Regent's Park (Mr. E. O. Sachs).

Norwood.—Bay windows, porches, oriel windows, and barge-boards to five houses on the western side of Baytree-road, Brixton (Messrs. E. Evans & Sons for Messrs. Leeks & Blake.)

Poplar.—Oriel windows in front of Nos. 192-196, East India Dock-road, Poplar (Mr. J. M. H. Gladwell for Mr. J. Rothstein).

Strand.—Projecting balcony at No. 264, Regent-street (Mr. C. T. Armstrong).

Woolwich.—Building on the northern side of Plumstead Common-road, Woolwich (Mr. J. B. Farrugia).

Width of Way and Lines of Frontage.

Hackney, Central—Iron staircases at Devonshire Hall, Devonshire-road, Hackney, next Frampton-park-road (Mr. C. G. C. Payne).

St. Pancras, East.—Addition and a urinal at the "Prince Albert" public-house, Great College-street, St. Pancras (Mr. E. Carter).

Building for the Supply of Electricity.

Marylebone, East.—Erection of a flue on the roof of an existing boiler-house at the electricity station, Grove-road, Marylebone (Mr. C. S. Peach for the Central Electric Supply Company, Ltd.).

Alteration of Buildings.

City of London.—Erection of an additional story at No. 4, Fenchurch-avenue, City (Messrs. Banister Fletcher & Sons).

Cubical Extent.

Wandsworth.—Erection of a foundry building upon the Osiers Estate, Point Pleasant, Wandsworth, exceeding 250,000 cubic ft. in extent and without a 6-in. layer of concrete over the site (Messrs. J. A. J. Woodward & Sons for the S. and O. Steel Patents Syndicate, Ltd.).

THE INCORPORATED CLERKS OF WORKS' ASSOCIATION.

The annual summer outing of this Association took place on Saturday, July 11, when a trip on the Thames took place between Henley and Windsor. About 240 members and visitors travelled from Paddington to Henley-on-Thames, and thence by the pleasure launch *Viscount* to Windsor. Dinner was provided at the White Hart Hotel, after which some time was spent in a ramble through the Park. The party left Windsor at 8.30 by the return train to London. The profit of these summer outings is placed to the credit of the Association's Benevolent Fund.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

AMMANFORD.—The L.G.B. have held an inquiry into the applications of Ammanford Urban and Llandilo-fawr R.C. for sanction to borrow £1,500 each for the purpose of constructing a stone arch bridge over the dangerous ford at Mardy, Pantyffynon.

Ashbury.—The Board of Education have approved of the plans for the improvement of the school.

Ashton-under-Lyne.—The L.G.B. have held an inquiry into the application of the T.C. to borrow £14,200 for the purpose of extending the sewage works at Plantation Farm.

Atherstone.—The U.D.C. have agreed to the provisional purchase of 5½ acres of land forming part of the Atherstone Hall Estate for the purpose of the erection of working-class dwellings.

Ayrshire.—The Works Committee of the Northern District Committee of Ayrshire C.C. have passed plans for the following:—Drill hall at Dalry, for the Ayrshire Territorial Association; tenement at Main-street, Dunlop, for Mr. Robert Smith, joiner; addition to Dubbs' farmhouse, Kilwinning, for Mr. William Millar; addition to Aitket Sawmill House, Dunlop, for Mr. James Craig; new buildings for Dalry Co-operative Society at New-street, Dalry; and additions to Wemyss Bay Hydropathic, Skelmorlie.

Bournemouth.—An inquiry has been held by the L.G.B. into the application of the T.C. for sanction to borrow £650 for the construction of a relief sewer through the Portman Estate and £300 for works of surface water drainage at Moordown.

Bradford (Wilts).—Building at Kingston Mills for Messrs. Spencer, Moulton, & Co.

Brechin.—The Brechin District Committee of Forfar C.C. have agreed to proceed with the erection of cottages for roadmen at Farnell, Stracathro, and Melgund, at a total cost of £722.

Bridport.—Two houses in Pymore-road for Mr. F. Cast.

Brighton.—The T.C. has decided to spend £25,000 on erecting a new concert hall for the municipal orchestra on the Aquarium site and remodelling the existing terrace to provide accommodation for outdoor performances. The concert hall will accommodate 1,200 people.

Brixworth.—Plans have been passed by the R.D.C. for a Radical Club at Spratton.

Cambridge.—Plans approved:—Additions to the Masonic Hall, Corn Exchange-street, for the trustees of the Isaac Newton Lodge, Masonic Hall; garage at Jesus-lane, for Jesus College; additions to Merton Hall Farm, Madingley-road, for Merton College, Oxford; workshops at Bridge-street, for Messrs. King & Harper, Bridge-street; additions at Shaftesbury-road, for Mr. W. T. Scruby, Shaftesbury-road; additions at Gwydir-street, for Messrs. Lacon & Co., Coronation-street; four houses in Cherryhinton-road, for Mr. W. E. Archer, Cavendish-avenue; additions to St. John's College; house at Trumpington Long-road, for Col. A. J. Lyon, St. Andrew's-street; additions at Madingley-road, for Cambridge University; garden house at Hinton-avenue, for Mr. R. Smith, Hinton-avenue.

Chatham.—Plans approved:—House, Kingswood-avenue, for Mr. H. P. Hughes; additions to Royal Sailors' Home, Military-road; petrol store at 89, High-street, for the Strood Motor Company; transformer station, Whitaker-street, for the Kent Electric Power Company; house, Maidstone-road, for Supt. A. E. Rhodes; auction hall, rear of Nos. 321 and 323, High-street, for Messrs. J. Presnail & Sons; six houses, Randall-road, for Mr. E. J. Knowler; two houses, Ewart-road, for Mr. H. A. Phillips.

Chester-le-Street.—The L.G.B. have held an inquiry into an application made by the Chester-le-Street R.D.C. for permission to borrow £12,200 for the purpose of erecting forty-seven houses under the Housing of the Working Classes Act. Mr. J. H. Mole, sanitary surveyor, said it was proposed to build ten houses, with five rooms and scullery, to let at 6s. 10d. per week; four with four rooms and scullery, to let at 6s. 6d. per week; and thirty-three with four rooms and scullery to let at 5s. 6d. per week. Each house would have a large garden and a bath, hot and cold water.

Christchurch.—Plans passed:—Additions to Mudeford House, deposited by Mr. T. S. Lunder, and house and shop, Barrack-road, deposited by Mr. W. J. Dacombe for Mr. A. G. H. Alsford.

* See also our list of Competitions, Contracts, etc., on page 114.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Aberdare	9	—	9	9	—	9	7½	6½	6½	6½
Accrington	9½	9½	9	9	9	8½	8½	6½	6½	6½
Altrincham	9½	10	10½	10	8½	10	9	6½	6½	6½
Ashton-under-Lyne	10½	10½	10	10½	9	10	9	6	6	6
Barnsley	9½	9½	9½	9½	9	8½	8	7	7	7
Barrow-in-Furness	9½	10	9½	9½	9½	9½	8½	7	7	7
Barry	9½	9½	9½	10	—	9	8½	6	6	6
Bath	8	8	8½	8	7½	7½	7½	5½	5½	5½
Bedford	8	7½	7½	8½	—	8	6½	5	5	5
Birkenhead	11	11	11	11½	11	11	9½	7	7	7
Birmingham	10	10	10	10½	9	10½	9	7	7	7
Bishop Auckland	9	9	9	9	10	9	7½	6	6	6½
Blackburn	10	10½	10	9½	9½	9½	9½	6½	7	7
Blackpool	10½	9½	9½	9½	8½	9	8½	6	6	6
Bolton	10	10½	10	10½	9½	10	9½	6-7	6-7	6-7
Bournemouth	8½	8½	8½	8½	8½	8½	8	6	6	6
Bradford	10	10	9	9½	9½	10	8½	7	7	7
Bridgwater	6½	6½	6½	6½	6½	6½	6	4	4	4
Brighton	8-9	8	8	—	—	—	—	—	—	—
Bristol	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Burnley	9½	9½	9½	9½	8	9	9½	6½	6½	6½
Burton-on-Trent	9	9	9	9	8½	9	8½	6	6	6
Bury	10½	10½	10	9	9½	10	9	6	6	6
Cambridge	9	8½	8½	9	9	9	7	5½	5½	5½
Canterbury	8½	8	8	10	—	8½ 9	6½	5	5	5
Cardiff	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Chatham	8	9	9	9	9	8½	7	6	6	6
Chelmsford	8	7½	8	9	—	7½	6½	5	5	5½
Cheltenham	8½	8½	8½	8½	—	8½	8	5½	5½	5½
Chester	9½	10	9½	9½	9½	9½	8½	5½	6½-6½	5-5½
Chesterfield	8½	9	8	8	9	8½	7½	5½	5½	5½
Colchester	8	8	8	9	8	9	6	5	5	5½
Coventry	9	9½	9½	9½	9½	9½	8½	6½	6½	7
Crewe	7	8	7½	9	8	7½-8	7½	5	5½	6
Darlington	9½	9½	9	9½	10	9	8½	6½	6½	6½
Derby	9½	9½	9	9	9	9	8	6½	6½	7
Doncaster	9	9	9	9	8½	9	8	6½	6½	6½
Dudley	8½	8½	8½	8½	8½	8	7½	5½	5½	5½
Durham	9	9	9	9	9½	9	8	6	6	6½
East Glamorgan and Monmouthshire Valleys	9	9	9	9	—	—	8	6½	6½	6½
Exeter	8	8	8	7½	7½	7½	7	5½	5½	5½
Folkestone	8½	8½	8½	9	8½	8½	7-7½	6½	6½	6
Gloucester	8	8½	8½	8	8	8½	8	6	6	6
Grantham	8	8	7½	7½-8	7½-8	7	6½	5	5	5½
Grays	—	10	10	—	—	9½	8½	7	7	7
Grimsby	9	9	9	9	9	8	8½	7	7	7
Great Yarmouth	7½	7½	7½	—	7½	7½	6	4½	6½	—
Halifax	9½	9½	9	8½	8½	9	8½	6½	6½	6½
Harrogate	9½	9	9	9	8	9	8½	6½	6½	6½
Hartlepools	9	10	9½	10	10	10	8½	7	7	7½
Hastings	8½	8	8	8½	8	8	7	6½	5½	5½-6
Hereford	8	8	7½	8½	8	7	6½	5	6½	6½
Huddersfield	9½	9½	9	9	10	9	8½	6½	7½	7½
Hull	10½	10	10	10	9½	9½	8½	7½	5½	5½
Ipswich	8½	8½	8½	9	8½	8½	7	5½	6	6
Lancaster	10	10	9	9	8½	8½	7½	5½	5½	5½
Leamington Spa	9	8½	8½	8½	8½	8½	8½	5½	6	6
Leeds	10	10	10	10	9	9½	8	7	7	7½
Leicester	9½	9½	9½	10½	9½	9½	8	7	7	7½
Lincoln	9	8½	8½	9	8	8½	8	6	5½	6
Liverpool	11	11	11	11	10½	10½	9½	6½	7	7
Llanelly	9½	9½	8½	8½	9	8½	8	5½	5½	5½
London	11½	11½	11½	11½	—	1s.	9	8	8	8
Loughborough	9	8½	8½	9	9	8½	7½	5½	5½	5½
Luton	9½	8½	8½	8½	9	8½	7½	5½	5½	5½
Maidstone	9	9	9	9	9	9	8	6	6	6
Manchester	10	10½	10½	11	9½	10	9½	6½	6½	7½
Mansfield	8½	9	8½	8½	—	8½	8	6	6	—
Merthyr Tydfil	9½	9½	9½	9½	8½	8	8	6½	6½	6½
Middlesbrough	9	10	9½	10	10	10	8½	7	7	7½
Newcastle-on-Tyne	10	10	10	10	10	10	9	6½	6½	6½
Newport, Mon.	9	9	9	9	8½	9	8½	6½	6½	6½
Northampton	9	9	9	9	8½	9	8	6	6	6
Norwich	8	8½	8½	8½	8	8½	7	5½	6	6
Nottingham	10	9½	10	10½	9½	10	9	7	7	7½
Oldham	10½	10½	10	10	9	10	9½	7	7	7½
Oxford	9	8½	8½	8½	8	8½	7½	6	6	6
Plymouth	9	9	9	9	9	9	8	6½	6½	6½
Pontypridd	9	9	8½	9½	9	9	7½	7	6	7
Portsmouth	9½	9½	9½	9½	—	9	8	7	6	6
Preston	10	10½	10	9½	9	8½	7½	5½	6	6
Reading	8½	9	9	9½	—	10	9½	6	6	6
Rochdale	10	10½	10	9½	8½	9½	7½	6	6½	7
Rochester	8	9	9	9	9	8½	9	6	6	6
Rugby	8½	8½	8½	8½	8	9½	9½	6½	6½	6½
St. Albans	9	9	9	9-10	9	9-10	8	5½	5½	5½
St. Helens	9	9½	10	9½	9½	9½	8	6½	6	6½
Scarborough	8½	9	8½	8½	8	9½	8½	6	6	6
Sheffield	10½	9½	9½	9½	9½	8	7½	6½	6½	6½
Shrewsbury	8½	8½	8½	8½	—	8½	8½	6½	6½	6½
Southampton	8½	9½	9½	8	P'cework	8½	7	5½	5½	5½
Southend-on-Sea	9	9	9	9	9½	9½	8½	6½	6½	6½
Southport	10	9½	9½	9½	—	9	7½	6	6	6
South Shields	10	10	10	10	10	9½	9½	6	6	6
Stockport	10½	10	10	10½	9	8½	7½	6½	6½	6½
Stockton-on-Tees	9	10	9½	10	10	10	9½	6	6½-7	7
Stoke-on-Trent	9	9½	9	9	7½	7½	7	6	7	7½
Stroud	7½	7½	7½	7½	9½	8½	8½	7	7	—
Sunderland	10	10	10	10	9½	9	7	5	5	5
Swansea	9	9	9	9	8½	9	9	6½	6	6½
Taunton	7	7	7	7	—	8½	8½	6	6	6
Wakefield	9½	9½	8½	9½	8½	9	6½	4½	7	7
Walsall	9	8½	9	8½	8½	9	8	7	7	6½
Warrington	8½	9½	9½	10	8½	9½	8½	5½-6	6	6-6½
West Bromwich	9½	9½	9	9½	—	9	9½	6½	6½	6½
Wigan	10	10½	9½	9½	9	9	7½	7	7	7
Windsor	9	9	9	10	—	10	9½	6	6	6
Wolverhampton	9½	9½	9½	10	8	8½	7½	6½	6½	6½
Worcester	8½	9	9	8½	8½	8½	8	6½	6½	6½
York	9½	9½	8½	9½	9½	8½	8	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

Cookham.—Plans passed by R.D.C.:—Mr. J. Fraser, alterations and additions, "Frattons," Maidenhead Thicket, Cookham; Sir E. A. Barry, Bart., additions, Ockwells Manor, Bray; Mrs. J. Richards, new house and stables, Littlewick, White Waltham; Mrs. Cockran, additions, gardener's cottage, Winter Hill House, Cookham; Messrs. Thomas Bros. & Co., Ltd., additions, Temple Mills, Bisham; Mr. Dion Boucicault, house, Hurley Village, Hurley.

Coventry.—A plan for a store in Humber-road for Coventry Co-operative Society has been approved by the R.D.C.

Darlaston.—Plans passed by U.D.C.:—Latrines at Alma Works, for Messrs. Horton & Son, Ltd.

Durham.—Plans passed by R.D.C.:—Addition to dwelling-house at Auton Stile, Mr. G. Innes; dwelling-house at Ushaw Moor, Mr. A. N. Ray.

Evesham.—The L.G.B. have held an inquiry into the application of the R.D.C. to borrow £3,400 for a housing scheme at Harvington.

Fleet.—The U.D.C. have passed plans of six cottages in Broad-street, for Mr Hoar; of stable, for Mrs. Jupp at Camelot, Albany-road

Foleshill.—Plans passed:—Factory, Bourne-road, Stoke, for Messrs. Hydraulic Engineering Company, Ltd.; four houses, Lythall's-lane, Foleshill, for Messrs. Marshall Bros.; four houses, Newtown-road, Bedworth, for Mr. Brooke Peake; three houses, Walsgrave-on-Sowe, for Mr. W. J. Roy; stores, for Messrs. Merry & Cunninghame, Binley; house, Windmill-road, Foleshill, for Mr. W. Carpenter.

Galashiels.—The T.C. have approved the plans by Sir Robt. Lorimer for alterations to the municipal buildings, estimated to cost £5,750, and the erection of a tower to cost £2,500.

Glasgow.—Warrants granted by the Dean of Guild Court:—Messrs. William M'Ewan & Co., Ltd., Fountain Brewery Fountainbridge, Edinburgh, buildings in Milton-street and Port-Dundas-road; Messrs A. G. Barr & Co., Ltd., aerated water manufacturers, 486, Great Eastern-road, alterations at Elba-lane, Parkhead; Messrs. Archibald Low & Sons, Ltd., Merkland Works, workshop at Merkland-street, Partick; Imperial Tobacco Company, Ltd., Earl-street, Bedminster, Bristol, alterations and additions at Tobago-street; Messrs. Alexander Stephen & Sons, Ltd., shipbuilders and engineers, Linthouse, building for store at Linthouse; Glasgow Corporation, erection for tramwaymen in Rutherglen-road, at Richmond Park; King's Cinema, Ltd., Glasgow, alterations on the picture house at 520, Sauchiehall-street; Mr. J. W. Gordon Oswald, of Scotstoun, to form a street and sewer on the lands of Scotstoun; Messrs. A. & J. M'Lellan, contractors, 15, Stanley-street, Kinning Park, buildings at the corner of Park-street and Sussex-street, Kinning Park.

Halesworth.—The U.D.C. have agreed to erect twelve working-class dwellings at an estimated cost of £2,161

Hartley Wintney.—Plans passed by R.D.C.:—Additions to the clubhouse at the Bramshot golf links and of a house at Elvetham, near the Fleet boundary, for Capt. Cobb.

Harwell.—Plans for the improvement of the Council school, for the Berks E.C., have been approved by the Board of Education.

Hythe.—Eleven cottages in East-street, for Mr. H. Lee.

Kenilworth.—The T.C. have approved a scheme for the erection of twenty-four workmen's houses.

Kirdford.—The architect of the West Sussex E.C. has been instructed to prepare sketch plans of a school for 100 children.

Lanchester.—Plans have been passed for the erection of over fifty new houses at Langley Park by the Consett Iron Company, Ltd.

Lewisham.—Building applications granted:—Mr. H. O. W. Thornton, Stainton-road, three houses on the west side; Mr. J. Nicholls, Manwood-road, five houses on the east side; Mr. W. B. S. Mills, Manwood-road, to reconstruct athletic club pavilion; Mr. T. D. Leng, Holbeach-road, additions to Holbeach-road School; Mr. Henry Kent, High-street, Lewisham, an addition to the London and Provincial Bank.

Limerick.—The T.C. have decided that the principal streets of the city be paved with stone setts, and that a loan of £25,000 for that purpose be applied for.

Lincoln.—Plans passed:—Mr. J. Plummer, four houses, Monks-road, corner of Devon-street; Messrs. Wright & Sons, Ltd., two houses, Queensway; Mr. J. Streets, house, Mainwaring-road; Messrs. Mowbray & Co., alterations to "Manvers Arms" Inn, Danesgate; Mr. F. W. Horton, house, Weir-street; Co-operative Society, alteration to mill, new silo house, and provender mill, Montague-street.

Linthwaite.—Addition to workshop of Messrs. Wrigley & Beaumont, at Hoylehouse.

Llandudno.—The U.D.C., having decided to erect twenty-four workmen's dwellings, a L.G.B. inquiry has been held into their application for sanction to borrow £4,855.

Llanelly.—A L.G.B. inquiry has been held into the application of the R.D.C. for sanction to borrow £36,304 and £4,949 for the purpose of sewerage and sewage disposal for the parishes of Llanelly Rural and Pembrey respectively.

Macclesfield.—Plans passed:—Two houses in Barracks-lane by the Misses Ingham and Mrs. Wylde; additions to Grosvenor-street Mill, deposited by Messrs. Neckwear, Ltd.; two cottages and alterations to a house in Peter-street, by Mr. Richard Mellor; additions to the Sutton Lyeworks, deposited by Messrs. J. W. White & Sons.

Mansfield.—Pair of semi-detached villas proposed to be erected by Mr. Gascoyne in St. Edmund's-avenue.

Melksham.—Workshop by Avon Rubber Company.

Midhurst.—A L.G.B. inquiry has been held into the application of the R.D.C. to borrow £780 for housing at Millend.

Norden.—Plans passed for Miss Grindrod, of Oulder Hill, for the construction of a new street

at Ouldcr Hill, and for Mr. Kershaw, of Redfearn, for two dwelling-houses at Redfearn.

Norwich.—The Housing Committee are recommending the T.C. to build houses, etc., in Starling-road, and that a competition be arranged and plans and drawing for the erection of the dwellings be invited from architects resident within seven miles of Norwich who are Fellows, Associates, or Licentiates of the Royal Institute of British Architects, or members of the Society of Architects; three premiums of £20, £15, and £10 respectively to be offered, and Councillor Boardman act as assessor on behalf of the committee.

Orsett.—The Orsett Joint Hospital Board are proposing to spend £4,114 on extensions to their isolation hospital.

Redruth.—Plans passed for two dwelling-houses at Mount Ambrose, for Mr. James Trudgeon, and one house at Trewirgie, for Miss Peter.

Rishton.—A plan of two dwelling-houses in Blackburn-road South, for Mr. C. H. C. Proudman, has been approved.

Rhyl.—The T.C. have decided to proceed with plans for the rebuilding of the amphitheatre on the pier at a cost of nearly £3,000.

Rollasley.—Plans passed by R.D.C.:—Three pairs of cottages at Burgh, for Bishop Fisher; house, Julier-road, Caister, for Mr. J. Green; six houses, Julier-road, Caister, for Mr. L. Flaxman.

Rotherham.—Plans passed by R.D.C.:—Thirteen streets and ninety-six houses, Morrell-street, Maltby, for the Maltby Main Colliery Company; seventy-eight houses in South and West streets, Thurcroft, for the Rothervale Collieries, Ltd.; fifty-two houses at South-street, West-street, and Sandy-lane, Thurcroft, for the Rothervale Collieries, Ltd.; and two houses and shops, Mugglet-lane, Maltby, for Mr. G. Brown.

Royton.—Plans passed:—Four houses, in street opposite Springfield-lane, for Mr. R. Bamford; pair of villas, near Pleasant Inn, Rochdale-road, for Mr. H. Beswick; eight dwelling-houses, for Mrs. Hannah Slack; school (mixed), Edge-lane, Longsight, for the vicar and officers of St. Anne's Church; new offices at the Lamb Mills, Higginshaw-lane.

St. Annes.—Plans passed by U.D.C.:—Detached villa in St. Annes-road East, for Messrs. G. C. Rushforth & Sons; detached villa in Church-road, for Mr. C. G. D. Hoare.

St. Columb.—Six working-class houses are to be erected by the R.D.C.

Sandhurst.—Additions are proposed for the Wesleyan School, and plans have been forwarded to the Board of Education.

Selkirk.—Mr. A. F. Roberts, of Fairnnee; Mr. T. J. S. Roberts, of Drygrange; Mr. G. D. Gibson, of Lintmailing; Mr. S. Strang Steel, of Philiphaugh; ex-Provost Sim, Tweedknowe, Selkirk; and Provost Allan, Selkirk, have given £5,000 for the erection of swimming baths, and the T.C. will give the site.

Shinfield.—Considerable improvements are contemplated in the Church of England School.

Slough.—Plans passed for house in Sussex-place for Mr. R. Cosens, one in Lansdowne-avenue for Mr. H. S. H. Brookes, and a motor garage in Martin-road for Mr. C. J. Jackaman. Plans passed by R.D.C.:—Seven cottages in the Oxford-road, Denham, for Mr. J. Bell White; structural alterations and additions to "Southlands," Denham, for Mr. G. F. Gadsden; house adjoining Gerrards Cross Common, for Mrs. H. M. Woodbridge; cottage at "Ashcroft," Burnham, for Mr. R. Dunthorne; new cottage in "One Pin"-road, Farnham Royal, for Mr. G. A. Ludgate.

South Shields.—A contract has been signed for the construction of a new dry dock at South Shields, for the Middle Docks and Engineering Company. The contractors are Messrs. Edmund Nuttall & Co., Manchester. The dock will be 630 ft. in length and 80 ft. in width at the entrance, while the depth at the sill will be 26 ft. Alongside there will be a deep-water quay 750 ft. long.

Stillsby.—Plans passed by R.D.C.:—Two cottages, for Boston Corporation, at Midville; bungalow at Ingoldmells, for Mrs. W. Hobson; additions to Hundleby House, Hundleby, for Mr. T. Hollis Walker; additions to a cottage at Aswardby, for Col. C. A. Swan, C.M.G.; new drainage, etc., to Council schools at Sutton-on-Sea; and additions to out-offices at Orby Council school.

Stalybridge.—Plans passed:—Alterations at the U.M. Sunday-school, Chapel-street; conversion of Royal Oak Inn, Vaudrey-street, into three cottages, for the trustees of the late Mr. Thomas Seel.

Swadlincote.—Plans passed by U.D.C.:—Salvation Army, additions to the Salvation Army Hall, Wilmot-road; Messrs. Foster Bros., alterations to shop premises, Market-place; by the Moira Colliery Company, Ltd., new offices, Church-street, Church Gresley.

Swanage.—House in Bon Accord-road, for Mr. Such.

Swindon.—Plans passed:—Mr. E. H. Bradley, six houses, Kingshill-road; Messrs. Bishop & Fisher, for Usher's Wiltshire Brewery, Ltd., alterations, Conservative and Unionist Club, Fleet-street; Mr. R. J. Beswick, for Dr. Dale, addition to Craven House, Victoria-road; and Mr. G. Kilminster, six houses, William-street.

Tilbury.—The L.G.B. have held an inquiry into the application of the U.D.C. for sanction to borrow £61,225 for a scheme under Part III. of the Housing of the Working Classes Act, 1890, for the purchase of land and the erection of working-class dwellings; £2,275 for the purchase of land in the North and South Wards under the Housing and Town Planning Act; £3,535 for works of surface water drainage and channelling; and £6,138 for the purchase of land in the South Ward for purposes of a depôt, allotments, and public walks and pleasure grounds. Mr. Petler, the architect, explained the housing scheme, and said the 234 houses would be in three classes. In Class I. thirty-two would be let at 7s. and eighteen at 7s. 3d.; Class II., sixty-four at 7s. 3d. and sixteen at 9s. 6d.; Class III., 104 at 5s. 3d.

Trawden.—Twelve houses for the Trawden Co-operative Society, Ltd.

Walsall.—The L.G.B. have sanctioned the T.C. borrowing money for the erection of new electricity works.

Walton.—The U.D.C. have approved plans for 172 cottages on the Whiteley Estate.

Wath.—Plans passed:—Four houses in Packman-road, for Messrs. R. & F. Wade; two houses by Mr. F. Crossley in Stump Cross-road.

Westhoughton.—Plans passed:—Messrs. John Booth & Sons, lavatory accommodation, Hulton Steelworks; Mr. R. A. Burrows, additions to house, Garthmere, New Brook-road; Messrs. J. Musgrave & Co., Ltd., new moulding shop, boiler works.

Wrexham.—The R.D.C. have decided to erect forty-four working-class dwellings at Gardden, Rhos, near Wrexham. The estimated cost of the houses, including cost of land, streets, and sewers, is £10,850. It is proposed to let the houses at 5s. 9d. per week clear.

Wye.—Plans of two cottages in Bridge-street, for Mr. W. E. S. Erle Drax, have been passed.

Yarmouth.—The Port and Haven Commissioners have a scheme for further accommodation estimated to cost £30,000. Plans passed by T.C.:—Stables, Kitchener-road, for Messrs. Pickford; warehouse, etc., Southgates-road, for Boatowners' Stores, Ltd.; additions to warehouse, Main Cross-road, for Mr. A. E. Baker; six houses, Century-road, Cobholm, for Messrs. J. & R. Chaston; garage, Marine-parade, Gorleston, for Mr. T. W. Warren; converting cottages into warehouse, Row 127, Middlegate-street, for Messrs. Porrett & Currey; salt store and net-drying chamber, Suffling-road, for Messrs. Bloomfield, Ltd.; fish curing sheds, Quayside, Southtown, for Mr. Edward Gordon; warehouse, Main Cross-road, for Messrs. J. Wolkoff & Son; house, Caister-road, for Mr. E. Hunt; rebuilding premises near Beeching's Quay, for Scottish Herring Company; gymnasium, Row 108, South Quay, for Y.M.C. Association.

WAGES IN THE BUILDING TRADE.

Chatham.—An advance in wages of ½d. per hour (8½d. to 9d.) has been granted to the plumbers in this district as from August 1.

Dundee.—The strike of painters, which began on April 6, was settled at a meeting convened by the Lord Provost. A representative of the Chief Industrial Commissioner's Department of the Board of Trade assisted at the meeting. The agreement arrived at provides that the standard rate of wages shall be 9½d. per hour, with a further advance of ½d. per hour on January 1, 1915.

Liverpool.—An advance in wages of ½d. per hour (10½d. to 11d.) has been granted to the plumbers in this district as from August 1.

Longridge.—An advance in wages of ½d. per hour (10d. to 10½d.) will be paid to the stonemasons in this district as from August 1.

Middleton.—On and after August 1 an advance in wages of ½d. per hour will be paid to the labourers in this district. The present rates are as follows:—Masons' labourers, 5½d. per hour; bricklayers' labourers and plasterers' labourers, 6½d. per hour.

Nottingham.—On and after August 1 an advance in wages of ½d. per hour (9½d. to 10d.) will be paid to the bricklayers in this district.

Preston.—An advance in wages of ½d. per hour (10d. to 10½d.) will be paid to the stonemasons in this district on and after August 1.

Stratford-on-Avon.—Mr. R. E. Moore, the arbitrator appointed by the Board of Trade to determine matters in dispute between the employers and the builders' labourers, has issued his award. The men asked for an advance in wages of 1d. per hour (4½d. to 5½d.), and struck work on May 1 in support of their demand. After hearing the parties the arbitrator raised the wages to 5½d. per hour, to remain in operation for eighteen months.

York.—On and after August 1 an advance in wages of ½d. per hour (8½d. to 9d.) will be paid to the carpenters and joiners in this district.

A DECEASED BUILDER'S ESTATE.

The late Mr. Henry Birkby, of Storr Hill House, Wyke, Bradford, retired builder and contractor, has left estate to the gross value of £21,755.

SEWERAGE AND SEWAGE DISPOSAL, GUISELEY.

On the 14th inst. Mr. A. W. Brightmore held a Local Government Board inquiry into the Council's application for sanction to borrow £3,700 for works of sewage disposal and surface water drainage. Mr. J. N. Nicholson, A.M.Inst.C.E., of Bradford, the Engineer, explained the details of the scheme.

PRIVATE HOUSE, CHELSEA.

A private house is in course of erection in Bedford-street, Chelsea, from the designs of Messrs. Rowland W. Cash and Christopher Wright, Old Burlington-street, W. The general contractors are Messrs. Allen Fairhead & Son, Enfield; the heating is by Messrs. Hayward Bros. & Eckstein, Ltd., Union-street, Borough, S.E.; the electric lighting is by the Electrical Contracts Company, Sanctuary House, Westminster; the marble work is by Art Pavements and Decorations, Ltd., Emerald-street, W.C.; the outside stairing is by the Bath and Portland Stone Firms, Ltd., Grosvenor-road, S.W.; and the stonework is by Messrs. G. Jackson & Sons, Rathbone-place, W.

GENERAL BUILDING NEWS.

CHURCH TOWER, HOLME NEXT RUNCTON, NORFOLK.

The tower of the church is about to be strengthened and repaired in accordance with a report made by Mr. Herbert Green, the Diocesan Architect. The builders' work is to be entrusted to Messrs. Neal Bros., contractors, of North Elmham, Norfolk.

SCHOOL, POPLAR, E.

The Woolmore-street Infant School, Poplar, is being rebuilt under the direction of Mr. W. E. Riley, F.R.I.B.A., Superintending Architect to the London County Council. The general contractors are Messrs. Patman & Fotheringham, Ltd., Theobald's-road, W.C.

SCHOOL, WEST HAM.

A school is being erected in Rosetta-road, West Ham, for the Education Committee of the County Borough. The architect is Mr. William Jacques, A.R.I.B.A., Fen-court, Fenchurch-street, E.C., and the general contractor is Mr. W. J. Maddison, Canning Town, E. The hot-water heating apparatus will be by Messrs. W. Watkin & Son, Wood Green, N.

FACTORY, STRATFORD, E.

The soap factory of Messrs. T. H. Harris & Sons, Marshgate-lane, Stratford, E., is being extended under the guidance of Mr. William Jacques, A.R.I.B.A., Fen-court, Fenchurch-street, E.C. The general contractors are Messrs. Clark & Son, Cambridge.

NEW BRITISH COLUMBIA BUILDING.

A few days ago Prince Arthur of Connaught laid the foundation-stone of the new British Columbia building, which will be erected at the corner of Regent-street and Charles-street, W. The building will include an exhibition hall and offices. The architect is Mr. Alfred Burr, F.R.I.B.A., of Gower-street, W.C., and the builders Messrs. Holland & Hannen and Cubitts, Ltd., of Hyde-street, Bloomsbury.

HOSPITAL, SOUTHWARK, S.E.

A site for the new Hospital for Diseases of the Chest has been cleared in the Blackfriars-road at the corner of Great Charlotte-street, S.E. The architect is Mr. William A. Pite, F.R.I.B.A., Jermyn-street, St. James's, S.W.

HALL, CROYDON, S.W.

A large hall, with seating accommodation for over 1,000, is in course of erection in the High-street, Croydon, for the Croydon Brotherhood. The architects are Messrs. Wratten & Godfrey, Carteret-street, Westminster, S.W., and the general contractors are Messrs. Fred. Pitcher, Ltd., Marylebone-road, N.W.

CONGHAM LODGE, NORFOLK.

Considerable alterations and additions have just been completed to this building for Sir Everard Ffolkes, Bart., entailing an outlay of about £4,000. Mr. Herbert J. Green, of Norwich, has acted as architect, and the work has been carried out by Messrs. Dye & Allen, of King's Lynn.

TRADE NEWS.

We are informed that Messrs. Coup, Phillips, & Co., manufacturers of the Uneeda self-adjusting casement stays and the Uneeda self-locking bolt, have now removed from 13, Clerkenwell-road to larger offices and showrooms at 26, Rosebery-avenue. Their new telephone number is 5252 Holborn.

Boyle's latest patent "air-pump" ventilator has been applied to the Workmen's Hall and Institute, Blaengwynfi (Glam.).

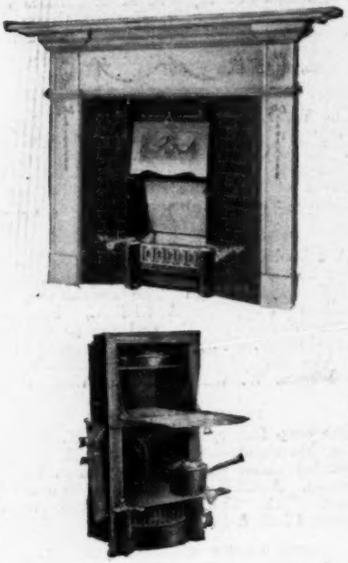
At the new Municipal swimming-baths, which are being erected in Salisbury, Rhodesia, the powder Pudlo (for making cement waterproof) has been specified. We understand that the cement work in connection with the office extension of the Tramways Department, Glasgow Corporation, is being treated with Pudlo.

We have received a prospectus from Messrs. G. Charles & Co., Blomfield House, Old Broad-street, dealing with the Pierre de Quilly, which is a Caen stone much used in old buildings for monuments and other purposes where an exceedingly fine-textured and even-grained stone was required. Messrs. G. Charles & Co. are sole agents for the stone in this country.

Claridge's Patent Asphalte Company, Ltd., announce that they have opened an agency in Manchester to cope with the work in the North Midlands district. Their representative is Mr. E. J. Thompson, of 36, Spring-chambers, Manchester.

The Royal Drill Hall, Derby, is being supplied with Shorland's patent exhaust roof ventilators by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

We omitted to mention in our list of exhibitors (July 10 issue) at the Royal Sanitary Institute Exhibition at Blackpool Congress the name of the Interoven Stove Company, Ltd., who were well represented



by their useful stoves. We give herewith illustrations showing the stove as a sitting-room grate and also open for cooking purposes.

WESTMINSTER CITY COUNCIL.

THE ordinary fortnightly sitting of the Westminster City Council was held on July 16, when the following matters were dealt with:—

Westminster Hospital Site.—The General Purposes Committee reported on the subject of acquiring the Westminster Hospital site for municipal purposes. Having pointed out the unsuitability of the present offices at Caxton Hall and the need for accommodating various departments under one roof, the Committee stated that they were of opinion that the position of Westminster Hospital site was eminently suited for the erection of a city hall and a public hall, with the necessary adjuncts. Draft plans had been prepared by a member of the Committee, which showed that a commodious building could be erected thereon, with ample accommodation for the present and anticipated requirements of the Council, and also for a large and up-to-date public hall, with the necessary ante-rooms and appurtenances. With regard to the cost of the scheme, this would, of course, depend on the price of the site, which would have to be the subject of negotiation, and the cost of the building to be erected. They had, however, had estimated figures submitted to them, and also a report on the letting and sale values of the various halls belonging to the Council. From these figures and report they were satisfied that, if the whole cost of purchasing the site and erecting the new building was raised by loan repayable with interest by yearly instalments spread over a period of years, the rents from the existing halls would cover most of the cost of the site and buildings, and only a fractional part would have to be met out of the rates. The Committee recommended that negotiations be entered into for the purchase of the site, and the Finance Committee submitted an estimate of £350,000 for the site and buildings. The Council discussed the matter in committee, and ultimately it was deferred.

Rubber Pavement.—Permission was granted to Messrs. Martin, Ltd., of 210, Piccadilly, to lay rubber bricks in front of their premises for experiment in order to reduce noise.

PARLIAMENTARY NOTES.

Fixing of Prices.

In the Parliamentary Papers Mr. Chiozza Money asked the Attorney-General if his attention had been directed to the existence of agreements between manufacturers on the one hand and retail tradesmen on the other, by virtue of which the former bound down the latter not to sell goods to the public for less than a definite fixed price; and whether, in view of the artificial raising of prices caused by the widespread practice of this trade policy, he would advise proceedings to be taken to test the legality of the practice, as it had been tested in the United States of America. The Attorney-General said he did not know what kind of proceedings Mr. Money referred to. He could not advise the Crown to take proceedings unless illegality appears to exist.

Charter of Royal Institute of British Architects.

Mr. Stuart-Wortley asked the President of the Board of Education whether the Royal Institute of British Architects was applying for a grant of a new charter; whether an opportunity would be given for petitions to be presented by persons whose interests were affected for the modification of such charter; by what authority the questions raised by such petitions would be heard and determined; and whether he could give any information as to the time of such hearing and the procedure to be followed.

Mr. J. A. Pease replied as follows: "I am informed by the Lord President of the Council that no petition to the King in Council praying for the grant of a new charter to the Royal Institute of British Architects has been lodged at the Privy Council Office. Should any such application be made, formal notice of the presentation of the petition would be published in the *London Gazette*, and persons interested could then lodge petitions for or against the charter prayed for. All such petitions, together with the original petition, are referred by his Majesty to a Committee of the Lords of the Council for consideration and report."

British Arts and Crafts Exhibition.

In the Parliamentary Papers Mr. Grant asked the President of the Board of Education if the collection of British arts and crafts now exhibited in Paris at the Louvre was to be brought to London and exhibited at the Victoria and Albert Museum; if so, was it proposed to re-erect the scheme of decoration by Mr. Harry Wilson; and, if so, if he would state what educational advantage commensurate with the cost would be gained by the public.

Mr. Pease replied that if the owners of the objects were willing to lend them he would endeavour to arrange for their exhibition at the Victoria and Albert Museum. The answer to the latter part of the question was in the negative.

Indian Architecture.

Mr. King in the House of Commons asked the Under-Secretary of State for India whether he was aware that formerly the instruction in architectural design given in Indian engineering colleges was limited to copying diagrams of the classic orders of Europe, while Indian architecture was ignored entirely, and that this qualification in architecture was held to enable assistant engineers of district boards to design buildings for municipalities; and whether these conditions as to training and qualifications of engineers doing architectural work still prevailed in any part of India.

Mr. C. Roberts said that in the two engineering colleges where instruction in architectural design was given, viz., the Thomason College at Roorkee and the Sibpur College, it was not limited in the manner suggested. The Secretary of State had received from the Government of India some details as to the instruction actually given, which he would be glad to show to the Hon. Member. Assistant engineers of district boards were not ordinarily entrusted with the designs of buildings of any importance.

OBITUARY.

Mr. F. D. Clapham.

We regret to announce the death, on July 17, as the result of an accident, of Mr. Frederick Dare Clapham, aged forty-one years (senior partner of the firm of Messrs. Clapham & Symons-Jeune), of 4, The Avenue, Beckenham. Mr. Clapham was the elder surviving son of the late Douglas Clapham, of Leabrook, Broxbourne; he was elected an Associate of the Royal Institute of British Architects in 1901, and a Fellow in 1909. In 1891 he became a member of the Architectural Association, of which he served as a Vice-President for 1909-10, and was elected as member of Council for the sessions of 1901-4, 1907 (in part), 1908-11, and 1913-4; he was Honorary (London) Secretary for the Association's annual excursions to Cheltenham and Rouen in 1909 and 1913. In 1898 Mr. Clapham gained the Architectural Association silver medal for his designs for a convalescent home (October 29 1898*). He became chief assistant of the late E. W. Mountford, who in April, 1907, took him into partnership; Mr. Mountford died in February of the following year. Messrs. Mountford & Clapham were the architects of the Congregational Church, Earlsfield-road, Wandsworth, and as the surviving partner Mr. Clapham was architect for the completion in 1909 of the Town Hall, Lancaster, which includes also a court-house, police quarters, fire-brigade station, public hall with a capacity for 2,500 persons, and the organ-case (designed by them), at a total cost of some £155,000 (November 9, 1907*); for the further additions, comprising the large library, to the Battersea Polytechnic (March 28, 1891, and July 23, 1892*) in 1909-10; and the completion of the Northern Assurance Company's premises in Lothbury and Coleman-street, E.C. (July 27, 1907*), by the late E. A. Gruning and E. W. Mountford, in which work he was, we understand, associated with Mr. H. Alexander Pelly, who succeeded to E. A. Gruning's practice upon the death of the latter in December, 1908. He was the architect of the Globe Wernicke Company's factory and offices, 1912-13; in 1910 his and Mr. Henry Tanner's joint designs (October 22, 1910*) for the Queen's University, Belfast, won the second premium; in 1903, the third premium was awarded to the joint designs (out of seventy-three sent in) of Mr. Clapham and Mr. A. Cox, F.R.I.B.A,. for the Free Library, Workington. In February of last year Mr. Clapham took into partnership Mr. B. H. B. Symons-Jeune, under the style of Messrs. Clapham & Symons-Jeune, of Norwich House, Southampton-street, Bloomsbury, W.C. We may add that Mr. Clapham was distinguished by considerable histrionic gifts; he took leading parts in the casts of the Architectural Association's plays in 1908-9-10-11 (see his sketch portrait by Mr. E. A. Rickards in our issue of June 2, 1911); in the *Builder* of October 30, 1909, is a report of his paper read to the Association describing their annual excursion of that year to Cheltenham and the district around.

* Illustrated in the *Builder*.

TRADE CATALOGUES.

We have received from the Sturtevant Engineering Company, Ltd., 147, Queen Victoria-street, London, a pamphlet, which has just been issued, illustrating and briefly describing the Sturtevant specialities for picture theatres. The firm's air washer, air turbine vacuum cleaner, and propeller fans are shown and described.

Messrs. Marshall, Sons, & Co., Ltd., Britannia Ironworks, Gainsborough, have sent us a catalogue showing the wide range of sizes and types of the steam-engines and boilers which they manufacture for power purposes in laundries, hospitals, workhouses, baths, and other public institutions. From the various references given therein it is evident that a large number of the leading laundries and institutions in this country have adopted the firm's power plants, the illustrations of which are well shown in the catalogue. The firm have also issued a pamphlet, in which the "Marshall" fixed and portable crude oil engines (semi-Diesel system) are described and illustrated. Their London offices, showrooms, and stores are at Marshall's-buildings, No. 79, Farringdon-road, E.C.

The Teale Fireplace Company, Ltd., Cookridge-street, Leeds, have sent us copies of two new lists, "C" and "G. C.," in which will be found illustrations and particulars of some of their well-known fireplaces. The firm's gas-or-coal-fire-at-will combination can be built in solid, and a large variety of designs can be used. When the coal fire is in use the gas fire cannot be seen at all, the gas contrivance being out of sight, and the gas connection is such that no leakage, it is claimed, can occur. The Bunsen burner is placed opposite the supply nipple, no positive connection being required. The gas fire can be lighted and be at its full efficiency in a few minutes, or if the weather is cold enough the coal fire can be used.

Messrs. Gunton Bros., of Costessey, near Norwich, send us a small brochure containing photographs showing the use of their hand-made sand-faced bricks in chimneys, tracery, and other similar uses. The illustrations are excellent, and show that the firm can be safely entrusted to carry out intricate work. The *tour de force* in moulded brickwork is naturally tracery, as it may be termed, the use of a material for a purpose it is ill adapted for; yet few can deny the charm of brick tracery. The illustrations also show work in white Costessey ware, which is apparently something of a terra-cotta nature giving the appearance of stone.

* Illustrated in the *Builder*.

LAW REPORTS.

COURT OF APPEAL.

(Before the MASTER OF THE ROLLS and Lords Justices SWINFEN EADY and PICKFORD.)

Builder's Appeal in Claim under Workmen's Compensation Act:

Pritchard *v.* Torkington.

THIS case was heard on July 7, upon the appeal of the respondent, Mr. Alfred Torkington, a builder at Rhyl, from the award of the County Court Judge sitting at Rhyl as the arbitrator under the provisions of the Workmen's Compensation Acts, in favour of the applicants, the dependants of a deceased man named Owen William Pritchard.

Mr. Rigby Swift, K.C., and Mr. A. T. Miller (instructed by Messrs. James Chapman & Co., Manchester) appeared in support of the appeal; and the Hon. A. Shaw (instructed by Mr. F. J. Gamlin, of Rhyl) on behalf of the applicants.

Mr. Rigby Swift said the point raised by the appeal was whether the accident to the deceased man arose out of his employment. The facts were these:—The appellant was a builder with offices and a yard at Rhyl, but he resided at Prestatyn. The deceased man lived at Rhyl, and was the appellant's bookkeeper and manager. In November last the appellant was building four houses at Prestatyn, and the duties of the deceased were to go to the office at Rhyl each morning at seven o'clock, see that all was in order, give necessary instructions to the men, and then proceed by rail to Prestatyn and take to the appellant any letters of importance which required his attention, and then go to supervise the work at the four houses which were then in course of erection. For this purpose the appellant purchased for the deceased a contract ticket, allowing him to travel between Rhyl and Prestatyn. On the morning of November 25 the deceased, having finished his work at Rhyl, left by the 8.31 a.m. train, which arrived at Prestatyn. The railway line was that running between Chester and Holyhead. There was at Prestatyn a footbridge over the railway lines, by which the passengers were supposed to cross. There was also a level crossing, but that was only for the use of the company's servants and for taking over the luggage. The railway company put up two notices. One ran as follows: "Cross the line by the bridge way," and the other was, "The public must cross the lines by the footbridge only." The deceased had to cross the lines in order to carry out his duties, but instead of using the footbridge he crossed by the level crossing, and, after passing the engine of the standing train by which he had travelled (which was taking in water), an express train rushed up on the fast line and killed him. The County Court Judge, upon hearing the evidence, in a reserved judgment held that the accident arose out of and in the course of the deceased's employment, and therefore that his dependants were entitled to compensation. The learned counsel contended that the learned County Court Judge had misdirected himself in holding that the risk was incidental to the deceased man's employment as manager and bookkeeper to the appellant. The County Court Judge had seemed to base his decision upon the point that the appellant had himself crossed the line by the level crossing from time to time, and that the railway company knew that some other passengers did cross the line in that way. There was, however, evidence that the deceased was told by the stationmaster that he must not cross the line except by the footbridge. He submitted that the County Court Judge, in the circumstances, ought to have entered his award in favour of the appellant.

Mr. Shaw supported the award of the County Court Judge on behalf of the dependants of the deceased, contending that upon the evidence the accident which took place was a risk which was incidental to the deceased man's employment, who had a right to take a "short cut" for the purposes of his employment. He further submitted that the act which led to the man's death was no freakish act of his.

At the conclusion of the arguments,

The Master of the Rolls, in giving judgment, said that upon the evidence and on the authorities he had come to the conclusion that the present was not a case in which they were entitled to hold that the accident arose out of the deceased's employment. The appeal must be allowed.

The Lords Justices concurred.

OFFICIAL REFEREE'S COURT.

(Before Mr. MUIR MACKENZIE.)

Boyer *v.* Howell J. Williams, Ltd.

MR. MUIR MACKENZIE, one of the Official Referees of the High Court, delivered his considered judgment in this case on Wednesday, July 15. The action was to recover £817 9s. 6d., balance of an account of £1,667 9s. 6d. for excavation work for the foundations of artisans' dwellings on the Lewis Trust Estate at Leader-street, Chelsea, erected by the defendants for the trustees of the Lewis Trust.

The plaintiff is a contractor carrying on business at Terminus Wharf, Paddington, and the defendants are builders in Bermondsey-street, London. The defendants admitted that the work was done, but disputed the measurements and charges.

The Official Referee, in giving judgment, said that on or about February 19, 1913, the defendants invited the plaintiff to give a price for digging trenches for the foundations of the buildings, stipulating that there should be 4,376 cubic yds. of trench not exceeding 6 ft. in depth, 2,200 cubic yds. of trench to form pile holes exceeding 6 ft. and not exceeding 12 ft., and 200 cubic yds. not exceeding 18 ft. Upon these figures the plaintiff gave a quotation of 4s. per cubic yard, which he afterwards reduced to 3s. 9d., including labour and strutting. The defendants had a general foreman on the site, and by orders of the clerk of the works conveyed through that foreman the plaintiff made trenches the majority of which differed in depth from the original stipulation. The defendants had paid, including a sum paid into court, £1,271 16s. 3d., and said that the plaintiff had been overpaid. The plaintiff said that for the 3s. 9d. per cubic yard he was only called upon to do the work specified in the contract, and that for anything done beyond that he was entitled to extra payment. This contention was supported by authorities, and he (the learned Referee) decided that the plaintiff was under contractual obligation to do only that work specified in the contract and no other at 3s. 9d. per cubic yard, and that he was entitled to be paid for his extra work. As to the measurements, they were not taken regularly and systematically on behalf of the plaintiff, and the figures of the measurements given by the defendants to the plaintiff were inaccurate and unreliable. The depths given by the defendants to the plaintiff were not the true depths of the work done by the plaintiff. He had carefully considered the evidence, and had come to the conclusion that the trenching ought to be paid for at the rate of 4s. a cubic yard, and that would leave a balance due to the plaintiff beyond the amount paid into court of £92 1s. For that amount he gave judgment for the plaintiff, and judgment would be entered accordingly, with costs on the High Court scale. Counsel for the defendants applied for a stay, which the Referee granted on the usual terms, observing that in his opinion there was a fair question for argument on appeal.

Counsel for the plaintiff were Mr. F. A. Greer, K.C., and Mr. F. O. Langley, instructed by Messrs. Dod, Longstaffe, Son, & Fenwick, and for the defendants Mr. J. B. Matthews, K.C., and Mr. Craig Henderson, instructed by Messrs J. T. Lewis & Wood.

KING'S BENCH DIVISION.

(Before Mr. Justice HORRIDGE.)

Claim against Building Owners—Architects said to be Agents:

Hampton & Co. *v.* Glamorgan County Council.

THIS was an action brought by Messrs. Hampton & Co., hot-water heating engineers, of City-road, Cardiff, against the Glamorgan County Council of Cardiff to recover a sum of about £197 17s. as balance due on a contract for the installation of a low-pressure heating apparatus at a girls' intermediate school at Pontypridd erected by the Council. The Council denied liability, pleading that they did not contract with the plaintiffs for the work.

Mr. Colam, K.C., and Mr. R. Fortune were counsel for the plaintiffs, and the defendants were represented by Mr. Roche, K.C., and Mr. Field.

Mr. Fortune explained that it was admitted that the plaintiffs had executed the work. The builder was a Mr. Shail, and the architects of the building were Messrs. Evans, Williams, & Evans, and the plaintiffs' case was that upon the letters and in consequence of certain interviews it appeared that the builder and the architects gave the plaintiffs the work as the agents of the Council as building owners. This was the plaintiffs' case.

Mr. Roche, K.C., for the defendants, said the architects and builders were not their agents, and were not authorised to contract for them with the plaintiffs.

Mr. Fortune said that there was an interview between Mr. Hampton and Mr. Evans, at which Mr. Evans said, "The contract is yours." Mr. Hampton wrote expressing thanks, and Mr. Evans wrote to the builder telling him to accept Mr. Hampton's tender for the hot-water system. Then the builder replied to the plaintiffs saying he was instructed by the architects to say that their scheme for the hot water had been approved by them. The plaintiffs had received about £200 from Mr. Shail on account. The plaintiffs' tender was for about £390, and the building contract price was £13,600.

For the defendants Mr. Roche, K.C., contended that it was a lump-sum contract in which the work done by the plaintiffs was included, and therefore the builder and not the Council were liable.

Mr. Justice Horridge said that the question he had to decide was whether the contract made by Mr. Shail with the plaintiffs was made on his own behalf or under the authority of the contract he had entered into with the defendants so as to make the defendants principals of the contracts that he made. In his opinion, the defendant Council did become principals, and were liable to the plaintiffs, and he gave judgment for the plaintiffs for the amount claimed and costs.

A stay of execution was granted to the defendants on certain terms.

KING'S BENCH DIVISION.

(Before Mr. Justice BAILHACHE.)

Ferro-Concrete Builders and a Contract:

F. Bradford & Co. *v.* Howes & Son, Ltd.

THIS case, heard on July 15, was an action in which the plaintiffs, Frank Bradford and Chas. David Hunter, trading as F. Bradford & Co., London, ferro-concrete builders, proceeded against Howes & Son, Ltd., Chapel Field, Norwich, motor-car engineers and carriage-body builders, to recover £486 2s. 1d. for work done and materials supplied in connection with the putting in of a ferro-concrete floor at the defendants' new works.

Mr. Ward appeared for the plaintiffs and Mr. Holman Gregory, K.C., and Mr. Mackinnon for the defendants.

Mr. Ward stated that the plaintiffs' claim was admitted, and there was a counter-claim by the defendants for damages.

Mr. Holman Gregory, K.C. (for the defendants), then outlined the counter-claim, which (he said) was for £325 6s. 3d. The plaintiffs were ferro-concrete experts, and in 1913 the defendants made arrangements with a firm called Messrs. Searles for the rebuilding of their premises at Norwich, the scheme involving the building of an extensive first floor with ferro-concrete, and for the purpose of this work being done the architect, Mr. Bond, entered into communication with Messrs. Bradford, who tendered successfully for the work, and said that the work could be completed in five to six weeks. The work was begun in June and finished in September, and on September 16 they sent their men to take away the supports, and when this work was started the floor broke up and the work had to be done again. The plaintiffs admitted that there had been a breach of contract, and to minimise the damages they started to put in a new floor, and it was stated by them that the people who had contracted with them to supply the cement had supplied cement of an unsatisfactory quality. The result of it all was that the premises were not ready for the defendants' occupation till December 24, and the defendants claimed damages respecting this delay, and the chief item in the counter-claim was for £200 for loss of profits. While the negotiations were going on between the parties with regard to the contract the defendants were working in their old premises, which it was intended to pull down. The plaintiffs were asked by the architect if it was possible to do the work in sections, but he was told that this could not be done, and the plaintiffs were then made aware that it would be necessary for the defendants to take temporary premises, so that the plaintiffs had full knowledge of the results of delay.

His Lordship eventually gave judgment for the plaintiffs for the amount claimed, £486 2s. 1d., and on the counter-claim he reduced the amount estimated for the repair of concrete to £10, and gave judgment for the defendants for £315 6s. He gave the plaintiffs the costs of the action, and the defendants the costs of the counter-claim.

THE SANDERS ESTATE, DENMARK-HILL, S.E.

Large areas of land on the Sanders Estate, Denmark-hill, S.E., are in course of development. The proximity of Ruskin Park makes the neighbourhood desirable from a residential point of view, and several new roads are being cut for the convenience of those who will occupy the houses in course of erection. These will be mostly for people with moderate means.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xx. xxi.; Auction Sales, xxvi. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

Competitions.

JULY 24.—**Chapel-en-le-Frith.**—COTTAGES.—The Chapel-en-le-Frith R.D.C. invite competitive designs for cottages. Premiums, £10 10s., £5 5s. and £2 2s. See advertisement in issue of July 3.

JULY 25.—**Redhill.**—POLICE AND FIRE STATION.—The Reigate B.C. invite competitive designs for a new police and fire station. Three premiums are offered, viz., 40, 20, and 10 guineas. See advertisement in issue of June 5, also particulars in issue of June 19.

SEPTEMBER 7.—**London.**—SCHOOLS.—The L.C.C. invite architects to submit designs for two new schools. See advertisement and full particulars in issue of May 1.

* SEPTEMBER 15.—**Not mentioned.**—NATIONAL THEATRE.—The Shakespeare Memorial Committee invite architects to submit photos and drawings of important buildings they have erected, with a view to the selection of six to enter a competition. The authors of five designs selected will receive a premium of 150 guineas each, and the author of the design placed first will receive a premium of 500 guineas.

SEPTEMBER 18.—**Glasgow.**—BUILDINGS.—The Corporation invite from architects competitive plans of buildings proposed to be erected at the north-west corner of Trongate and High-street. Premiums of £50, £30, and £25 respectively will be awarded to the authors of the designs adjudicated first, second, and third, in order of merit. Plan of the site, along with a copy of the terms and conditions of the competition, of Mr. J. Lindsay, Town Clerk, City-chambers, Glasgow. Deposit, £1 1s. See particulars in our issue of July 10.

OCTOBER 31.—**St. Helens.**—POLICE BUILDINGS AND FIRE STATION.—The St. Helens C.B. invite competitive designs for the above buildings. Premiums, £100, £50, and £25. See advertisement in our issue of July 10.

JANUARY 15, 1915.—COLLEGE MEMORIAL LECTURE HALL.—Designs for the Alexander Thompson Travelling Studentship must be delivered by the above date. See advertisement in issue of January 30.

NO DATE.—**Bristol.**—SCHOOL.—The Bristol E.C. invite designs from Bristol architects for a new infants' Council school, at St. Philip's Marsh, to accommodate 300 children. Mr. Wm. Avery Adams, Secretary for Education, Guildhall, Bristol.

* NO DATE.—**Tottenham.**—SCHOOL.—The Tottenham E.C. invite designs for school for 900 scholars.

* NO DATE.—DRAWINGS OR PHOTOS.—Messrs. W. E. Whiteside & James Caslake, Ltd., offer prizes for examples of metal work.

Contracts.

BUILDING AND PAINTING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

JULY 27.—**Birmingham.**—PAINTING.—For the painting of certain wards etc., at Selly Oak Infirmary, Birmingham. Specification from the Steward at the Infirmary. Deposit, £1 1s.

JULY 27.—**Cannock.**—PAINTING, ETC.—For painting, etc., various schools for the Cannock E.C. Specification of the Surveyor, Council Offices, Cannock.

JULY 27.—**Crewkerne.**—COTTAGES.—Erection of twenty cottages in Lyne-road, Crewkerne, for the U.D.C. Specification of Mr. B. Slade, Surveyor, Council Offices, Crewkerne.

JULY 27.—**Doncaster.**—EXTENSIONS.—For extensions and alterations to the premises of the Hyde Park Council Schools. Quantities from the Borough Surveyor, 3, Priory-place.

JULY 27.—**Erith.**—SCHOOL.—Erection of a public elementary school at Lower-road, Belvedere, for the Erith U.D.C. Quantities from the Surveyor to the Council, Council Offices, Erith. Deposit, £3 3s.

JULY 27.—**Fartown.**—HOUSES.—Erection of two dwelling-houses in Skipton-avenue, Fartown. Quantities of Messrs. Joseph Berry & Sons, architects, 3, Market-place, Huddersfield.

JULY 27.—**Glamorgan.**—VARIOUS WORKS.—The Glamorgan C.C. invite tenders for (1) new boys' school at Pontardulais; (2) improvement of offices at Herbert-road School, Melincrythan, Neath; (3) boundary wall and levelling playground at the infants' school at Aberdulais, near Neath; (4) new school at Aberkenfig; (5) mining and engineering laboratory at Pontypridd Boys' Intermediate School; (6) mining and engineering laboratory at Aberdare Boys' Intermediate School; (7) painting the following schools, viz.:—Taffs Well Boys' and Girls' and Teachers' house, Bargoed Infants', Blackmill, Bryncethin, Glyn-ogwr, Tondu, Evanstown Mixed and Infants', Gellidawel (Tonyrefail), Cwmlai and temporary building (near Tonyrefail), Llanharan, Troed-rhiwfuwch Mixed, Cwmaber temporary building (Abertridwr). Mr. W. E. R. Allen, Deputy Clerk of the County Council, Glamorgan County Hall, Cardiff.

JULY 27.—**Lancaster.**—PAINTING.—For external painting of the new block of the Royal Albert Institution. Specification of the Medical Superintendent, at the Institution, Lancaster.

JULY 27.—**Lockerbie.**—SLAUGHTER HOUSE.—Erection of slaughter house for the T.C. Schedules of Mr. J. B. Gladstone, architect, Lockerbie.

JULY 27.—**Lydney, etc.**—PAINTING.—Cleaning and painting station buildings, etc., at Lydney Junction, Lydney Town, Whitecroft, and Parkend for the Great Western and Midland Railways Joint Committee. Quantities at the Engineer's Offices, Midland Railway, Derby.

JULY 27.—**Nottingham.**—DEMOLITION, ETC.—For pulling down cottages and erecting washhouses, water closets, etc., in Denmark-court and Wollerton-place for the Corporation. Specification of Mr. A. Dale, City Architect, Guildhall. Deposit, £1 1s.

JULY 27.—**Nottingham.**—PAINTING, ETC.—The internal cleaning, painting, and papering of the several scattered homes in the city for the B.G. Specification of Mr. J. Allan Battersby, Clerk to the Board, Poor Law Offices, Shakespeare-street, Nottingham.

JULY 27.—**Petersfield.**—ALTERATIONS.—For alterations and additions to premises of Messrs. Timothy White & Co., at Petersfield. Specifications of the Manager, at 14, Chapel-street, Petersfield.

JULY 27.—**Radcliffe.**—DEMOLITION.—Demolition of buildings, comprising the White Lion Hotel, the shop and outbuildings adjoining, situate in Church-street and Blackburn-street, and the clearing and levelling of the site, for the Radcliffe U.D.C. Specification of Mr. W. L. Rothwell, Engineer and Surveyor, Council Offices, Radcliffe.

JULY 27.—**West Stanley.**—ADDITIONS.—Additions to St. Andrew's Church Institute, West Stanley, Co. Durham, for the trustees. Quantities of Mr. M. Wilson, architect, Front-street, West Stanley, Co. Durham. Deposit, £1 1s.

JULY 27.—**Wolverhampton.**—COTTAGES.—Erection of cottages in Red Lion-street, and for stables at the Barnhurst Farm. Quantities from Mr. George Green, M.Inst.C.E., Borough Engineer, Town Hall, Wolverhampton. Deposit, £1 1s.

JULY 27.—**Worcester.**—SHOEING SHOP.—Erection of shoeing shop at City Pound for the Corporation. Specifications of Mr. T. Caink, City Engineer, Guildhall.

JULY 28.—**Aberbeeg.**—ENGINE SHED.—Construction of an engine-shed and other works at Aberbeeg, Mon., for the Great Western Railway Company. Quantities of the New Works Engineer, at Paddington Station.

JULY 28.—**Bridlington.**—PAINTING.—For painting and cleaning the High School for Girls. Specification of Mr. G. G. Sutcliffe, Clerk to the Governors, Ellwood, Quay-road, Bridlington.

JULY 28.—**Gloucester.**—COTTAGE.—The erection of a cottage at Awre Junction, near Gloucester, for the Great Western Railway Company. Specification of the Engineer at Gloucester Station.

JULY 28.—**Kiveton Park.**—CINEMA HOUSE.—Erection and equipment of a cinema house in Wales-road, Kiveton Park, for the Kiveton Park Cinema Company, Ltd. Specifications from Mr. William Akrill, architect, South Anston, near Sheffield.

JULY 28.—**Landore.**—FOOTBRIDGES.—Erection of footbridges at Landore and Loughor for the Great Western Railway Company. Quantities of the Engineer at Neath Station.

JULY 28.—**Newcastle-on-Tyne.**—PAINTING.—Exterior painting, etc., at the Home for Incurables, Spital Tongues. Quantities at the City Estate and Property Surveyor's Office, Town Hall.

JULY 28.—**Stedham.**—ADDITIONS.—Alterations and additions to the Stedham Council school. Specification of Mr. Haydn P. Roberts, F.R.I.B.A., County Education Architect, Thurloe House, High-street, Worthing.

JULY 28.—**Widnes.**—VARIOUS.—(1) The provision and fixing of controls to the air inlets at the Council schools; (2) general repairs at the Council schools; (3) cleaning, painting, and decorating at the several Council and non-provided schools; (4) the removal of existing latrines and urinals for the boys', girls', and infants' departments of the West Bank Council School, Widnes, and the supply and fixing of modern sanitary conveniences. Specifications of Mr. H. S. Oppenheim, Town Clerk, Town Hall, Widnes.

JULY 29.—**Bolton Gate.**—FARMHOUSE.—Erection of farmhouse and out-offices at Bolton Hall, Bolton Gate. Mr. H. J. Watson, Cockermouth Castle.

JULY 29.—**Galway.**—EXTENSIONS.—Structural alterations and extension of office at the National Banking Company's premises, Eyre-square, Galway. Quantities of Mr. Thomas F. Slevin, quantity surveyor, 23, Stephen's-green, N., Dublin. Deposit, £2 2s.

JULY 29.—**Hessle.**—ALTERATIONS.—Alterations at Parish Hall for the Hessle U.D.C. Mr. William Coulson, Clerk, Parish Hall, Hessle.

JULY 29.—**Hull.**—PAINTING.—Painting required at the West Park. Forms of tender at the City Engineer's Office.

JULY 30.—**Acton.**—LODGE.—Erection of park-keeper's lodge, etc., at North Acton Public Playing Fields. Quantities of the Surveyor at the Council Offices, Acton, W.

JULY 30.—**Ipswich.**—TRANSFORMER SUB-STATIONS.—Erection of two transformer sub-stations adjoining Derby-road and Roundwood-road. Quantities of Mr. John R. Mead, Borough Engineer, Town Hall, Ipswich.

JULY 30.—**Sheffield.**—BATHS, ETC.—Erection of the following:—(1) Walkley and Hillsborough District Baths, Langsett-road; (2) baths central laundry, Penistone-road. Quantities of the City Architect, Town Hall, Sheffield.

JULY 31.—**Brighton.**—ALTERATIONS, ETC.—For alterations and additions to Middle-street Infants' School for the Brighton E.C. Quantities of Messrs. T. Simpson & Son, surveyors, 16, Ship-street, Brighton. Deposit, £2.

JULY 31.—**Congleton.**—ALTERATIONS.—Improvements and alterations to the St. Stephen's School, Congleton. Quantities from Messrs. Alfred Price & Son, architects and surveyors, Sandbach.

JULY 31.—**Easingwold.**—PAINTING.—Painting of the exterior and interior of the Easingwold Grammar School for the North Riding of Yorkshire C.C. E.C. Specifications from Mr. John Allison, High-street, Easingwold.

JULY 31.—**Maldon.**—ALTERATIONS.—For structural alterations, repairs, painting, etc., at Steeple Council School and Tollesbury Council School for the Essex E.C. Specifications from Mr. F. H. Bright, Clerk, Maldon D.S.C., 53, High-street, Maldon.

JULY 31.—**Pontllanfraith.**—HOUSES.—Erection of four houses at Pontllanfraith, Mon. Specifications of Mr. R. L. Roberts, architect, Abercarn.

JULY 31.—**Ross-on-Wye.**—ALTERATIONS.—For alterations and repairs to the Drill Hall in Cantilope-street, Ross-on-Wye, for the Herefordshire C.C. Specification of Mr. G. H. Jack, County Surveyor, Shire Hall, Hereford.

AUGUST 1.—**Bingley.**—PAINTING.—For paint work at the Bingley Cemetery, for the Bingley B.B. Specifications of Mr. John Greaves, Registrar.

AUGUST 1.—**Bolton.**—PAINTING.—For painting the Hollins Cottage Homes. Specifications from the Superintendent, the Homes, Plodder-lane, Farnworth, near Bolton.

AUGUST 1.—**Kiltormer.**—CEILING, ETC.—For wood ceiling, new sanctuary dais, altar railing, new vestry and porch, organ loft, floor, windows, etc., for Kiltormer R.C. Church. Specification, etc., as prepared by Mr. E. W. Lynam, M.E., Gortnamona, Ballinasloe, of Mr. John Egans, Kiltormer, Ballinasloe.

AUGUST 1.—**Rathdowney.**—ADDITIONS.—Additions to the Convent of St. John of God, Rathdowney, Queen's Co. Specification of Messrs. William H. Byrne & Son, architects, 20, Suffolk-street, Dublin.

AUGUST 3.—**Hopeman.**—HOUSE.—Erection of house in Hopeman. Specifications of Mr. R. B. Pratt, architect, Elgin.

AUGUST 3.—**Wantage.**—WORKMEN'S DWELLINGS.—Construction of six workmen's dwellings in three pairs, together with the construction of a sewer, house, and surface drains, sinking a well, and erection of wire and wrought-iron fencing, for the Wantage R.D.C. Specifications from Mr. John W. Harris, Engineer and Surveyor, East Challow, Wantage. Deposit, £2 2s.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

AUGUST 4.—**Cardiff.**—BUILDINGS.—Construction of new metallurgical buildings in the Parade, Cardiff, for the University College of South Wales and Monmouthshire. Quantities of Mr. E. M. Bruce Vaughan, F.R.I.B.A., architect, 21, Dumfries-place, Cardiff. Deposit, £2 2s.

AUGUST 4.—**Driffield.**—BRIDGE.—Taking down and rebuilding, in reinforced concrete, of the brick bridge over the Nafferton Drain at Brigham for the Driffield R.D.C. Specifications of Mr. T. Casson Beaumont, Surveyor.

AUGUST 4.—**Haslingden.**—PAINTING, ETC.—For painting and other work at the Infirmary and Workhouse, for the Haslingden B.G. Specification of Mr. A. N. Rothwell, Clerk to the Guardians, Union Offices, Rawtenstall.

AUGUST 4.—**Honley.**—BRIDGE WIDENING.—For the masons', paviors', and concreters' work and the constructional steelwork required to be done in the widening of Honley Bridge for the U.D.C. Quantities of Messrs. J. Berry & Sons, architects, 3, Market-place, Huddersfield.

AUGUST 4.—**Huddersfield.**—CONVENIENCE.—For a public convenience to be erected in beast market. Quantities of Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street.

AUGUST 4.—**Stockport.**—SHELTERS, ETC.—Erection of shelters, bowl-houses, and tennis pavilions at Shaw Heath and Heaton Norris Recreation Grounds. Specifications of Mr. John Atkinson, Borough Surveyor, Town Hall, Stockport.

AUGUST 5.—**Cramlington.**—STABLES, ETC.—Erection of stables, cartshed, etc., for the R.D.C. Specifications of the Surveyor, Mr. Wm. J. Coulson, Council Offices, Cramlington.

* AUGUST 5.—**Kent.**—PAINTING, ETC.—The Kent Education Committee invite tenders for painting and repairs to a school.

AUGUST 5.—**Lockwood.**—PICTURE PALACE.—Erection of the Alhambra Picture Palace, Lockwood. Quantities of Messrs. Joseph Berry & Sons, architects, 3, Market-place, Huddersfield.

AUGUST 5.—**Salisbury.**—CONVENIENCE.—Erection of public latrine, for the Corporation. Quantities of Mr. W. J. Goodwin, City Engineer, Municipal Offices, Salisbury.

* AUGUST 7.—**Derby.**—ALTERATIONS TO P.O.—The Commissioners of H.M Works and Public Buildings invite tenders for alterations to Midland-road Branch P.O.

AUGUST 10.—**Glasgow.**—APPROACH.—Mason, concrete, etc., work required in connection with the proposed new approach to the Kelvingrove Art Galleries for the Corporation. Specifications at the Office of Public Works, 64, Cochrane-street. Deposit, £1 1s.

AUGUST 10.—**North Seaton.**—SCHOOL.—Erection of new Council school at North Seaton, to accommodate 392 scholars, for the County of Northumberland E.C. Names, by the 25th inst., to Mr. C. Williams, Secretary to the Education Committee, The Moothall, Newcastle-on-Tyne. Deposit, £2 2s.

AUGUST 16.—**Kingsbridge.**—MARKET.—Fitting up of the new cattle market. Particulars of Mr. J. Hole, Surveyor to the Council, Kingsbridge. Deposit, £1 1s.

* AUGUST 18.—**Bristol.**—PUBLIC BATHS.—The Bristol Corporation invite tenders for public baths, Gloucester-road, Bishopston.

* AUGUST 20.—**Stevenage.**—SPECIAL SUBJECTS CENTRE.—The Hertfordshire C.C. E.C. invite tenders for a new special subjects centre.

AUGUST 24.—**Stanley.**—CONVENIENCE, ETC.—Erection of an underground convenience and a store house, for the U.D.C. Particulars of the Surveyor, Council Offices, Stanley.

AUGUST 25.—**New Quay.**—RENOVATION.—For renovation of the C.M. Tabernacle Chapel, New Quay. Specification of the architect, Mr. R. S. Griffiths, Tonypandy.

No DATE.—**Aberdovey.**—BUILDINGS.—Erection of buildings in connection with the new gasworks at Aberdovey, for the Dyssynni Gas Company. Specifications from Mr. J. Gaunt, engineer, 1, Norton-terrace, Llanbadarn-road, Aberystwyth.

No DATE.—**Bargoed.**—HOTEL.—Erection of Royal Hotel, for Mr. James Ward, Bargoed. Names to Mr. G. Kenshole, M.S.A., architect, Station-road, Bargoed. Deposit, £3 3s.

No DATE.—**Cardiff.**—HOUSES.—Erection of 250 workmen's houses, near Cardiff. Builders may tender for any number over fifty. Specifications of Mr. W. Beddoe Rees, architect, 3, Dumfries-place, Cardiff.

No DATE.—**Cardigan.**—PAINTING.—For painters' work at the undermentioned schools:—Comminscoch, Devil's Bridge, Goginan, Llanfihangel-y-Creuddyn, Llanilar, Ystumtuen, Llanafrth, Cilcennin, Tan-y-garreg, Llangeitho, Tabyty Ystwyth, Blaencaron, Maestir, Capel Cynon, Pontgarreg, Llechryd, Penypare; also internal decorations at the following non-provided schools:—Aberayron, Borth, Elerch, Llanddeiniol Llanrhystyd, Tregaron, and Aberbank. Specifications of Mr. Geo. Dickens-Lewis, County Architect, Aberystwyth.

No DATE.—**Crofton.**—COTTAGES.—Erection of thirteen cottages near to Crofton Station, on the Wakefield, Pontefract, and Goole line, for the Lancashire and Yorkshire Railway Company. Particulars of Mr. Henry Shelmerdine, estate agent, Lancashire and Yorkshire Railway, Manchester.

No DATE.—**Farnham.**—FOUNDATIONS.—Excavation work and concrete foundations necessary for the erection of a gasholder for the Farnham Gas and Electricity Company. Mr. A. E. Saville, Secretary and Manager.

No DATE.—**Gwyddelwern and Carrog.**—PAINTING.—Painters' work at Gwyddelwern Council School and Corrog Council School, for the Merioneth E.C. Specification of the County Architects, Messrs. Deakin & Howard Jones, M.S.A., Plas Ynys, Borth, R.S.O.

No DATE.—**Maesywaen.**—REPAIRS.—Repairs to Maesywaen Council School, near Bala, for the Merioneth E.C. Specifications of the County Architects, Messrs. Deakin & Howard Jones, M.S.A., Plas Ynys, Borth, R.S.O.

No DATE.—**Merioneth.**—PAINTING.—For painters' work at the following schools in the Festiniog School District:—Glanypwll Council School, Slate Quarries Boys' School, Llanfrothen Council School, higher elementary school, Slate Quarries Girls' School, Brontecwyn Council School, Talsarnau Council School, for the Merioneth E.C. Specifications of the County Architects, Messrs. Deakin & Howard Jones, M.S.A., Plas Ynys, Borth, R.S.O.

No DATE.—**Merthyr Tydfil.**—GARAGE.—Erection of a motor garage at Penydarren-yard. Specifications of the South Wales Transport Company, Ltd., 2, Rutland-street, Swansea.

No DATE.—**Oldham.**—WALL.—Erection of a brick boundary wall, about 450 lineal yds. for Corporation. Mr. Arthur Andrew, Gas Offices, Greaves-street, Oldham.

No DATE.—**Penistone.**—CHIMNEY.—Raising the chimney at the Thurlstone pumping-station. Mr. Charles Hodgkinson, Clerk to the Council, Penistone.

No DATE.—**Ryehill.**—HOUSES.—Erection of four houses at Ryehill. Specifications of Messrs. Birkinshaw, architects, Eldon-street, Barnsley.

FURNITURE, MATERIALS, etc.

JULY 27.—**Braintree.**—ROAD MATERIAL.—Supply of 700 tons of broken granite, and for the use of a steam roller and scarifier, for the Braintree U.D.C. Forms of tender of Mr. H. H. Nankivell, Surveyor, Vestry Hall, Braintree.

JULY 27.—**Manchester.**—FITTINGS, ETC.—Fittings and furniture at the Carnegie Library, Chorlton-cum-Hardy. Specification of the City Architect, Town Hall, Manchester. Deposit, £2 2s.

JULY 28.—**Southgate.**—FURNITURE.—Supply of various articles of furniture for the extended and existing Council offices. Specification from the Council's Surveyor, Mr. C. G. Lawson, C.E., Council Offices, Palmer's Green, N. Deposit, £2.

JULY 28.—**Woodford.**—ROAD MATERIAL.—Supply of broken granite for twelve months to the U.D.C. Forms of tender of Mr. W. Farrington, Surveyor, Council Offices, Woodford Green.

JULY 29.—**London.**—BRADS, ETC.—Supply to the Commissioners of H.M. Works, etc., of brads, nails, tacks, etc., during one year. Forms of tender of the Controller of Supplies, H.M. Office of Works, etc., 18, Queen Anne's-gate, Westminster, S.W.

AUGUST 1.—**Warrington.**—WOOD BLOCKS.—For 30,000 Jarrah wood blocks, 9 in. by 4 in. by 3 in. Specifications of the Borough Surveyor, Town Hall.

AUGUST 3.—**Hastings.**—ROAD MATERIAL.—For 2,000 tons of broken granite suitable for road metal, for the Corporation. Specification of the Borough Engineer, Mr. P. H. Palmer, Town Hall, Hastings.

* AUGUST 24.—**Shoreditch.**—FURNITURE AND FITTINGS.—The Shoreditch B.C. invite tenders for supply of new furniture and fittings.

No DATE.—**Colchester.**—FURNITURE.—Supply of the furniture required for the new Hamilton-road School, providing accommodation for 556 children. Forms of tender of Mr. Ernest H. Bultitude, Clerk, Education Offices, Trinity-street, Colchester.

ENGINEERING, IRON, AND STEEL.

JULY 27.—**Cambridge.**—STEAM APPARATUS.—For replacing steam piping and steam cooking apparatus and boiler at the Workhouse, Chesterton, Cambridge. Particulars of Mr. A. Wild, Master of the Workhouse.

JULY 27.—**Huddersfield.**—SLUDGE DISPOSAL PLANT.—The Corporation invite tenders for, viz.:—(1) Four reinforced concrete tanks and contingent works; (2) conveying and elevating machinery with all accessories; (3) sludge presses, rams, etc., (4) condensers, extractors, etc.; (5) corrugated-iron storage shed. Specifications of Mr. K. F. Campbell, M.Inst.C.E., Borough Engineer and Surveyor, 1, Peel-street, Huddersfield.

JULY 27.—**Keiss.**—HOT WATER INSTALLATION.—For introducing hot water system into Keiss Public School. Specification of Mr. Alexander Bruce, Clerk, Town-buildings, Wick.

JUNE 27.—**Lymm.**—IRON FENCING.—Supply and fixing of about 325 lin. yds. unclimbable iron fencing, 4 ft. 6 in. high, etc.; also three iron field gates, 10 ft. wide, for the Lymm U.D.C. Mr. W. Mullard, Clerk to the Council, Council Offices, Lymm.

JULY 27.—**St. Marylebone.**—PIPEWORK, ETC.—Pipework and boiler-house accessories, for the St. Marylebone B.G. Specification of Messrs. Weekes & Kolkhorst, of Maxwell House, Arundel-street, W.C. Deposit, £2 2s.

JULY 28.—**Paddington.**—GIRDERS.—Supply of about 120 tons of steel bridge girders and other iron and steel work of British manufacture, for the Great Western Railway Company. Quantities of the Engineer at Paddington Station.

JULY 28.—**Salford.**—GANGWAYS.—Supply and erection of suspended iron gangways at central car depôt for the Salford Corporation. Particulars of General Manager, 32, Blackfriars-street, Salford.

JULY 29.—**Wood Green.**—FENCING.—Supply and erection of about 420 yds. of wrought-iron unclimbable fencing, three double gates, and one single gate, for the Wood Green U.D.C. Specification from the Surveyor, Town Hall, Wood Green. Deposit, £1 1s.

JULY 30.—**Ashford.**—WELL PUMP.—Constructing a well pump, with motor and gearing and the brickwork pit to contain the same, at their schools at Ashford, Middlesex, for the West London School District. Specification of Mr. G. Midgley Taylor, M.Inst.C.E., of Caxton House, Westminster, S.W.

JULY 31.—**London.**—TOOLS.—Supply to the Commissioners of his Majesty's Works, etc., of engineers' tools during periods of one or three years from September 1, 1914. Forms of tender of the Controller of Supplies, H.M. Office of Works, etc., 18, Queen Anne's-gate, Westminster, S.W.

AUGUST 1.—**Shoreham.**—SEA DEFENCE WORKS.—Erection of eight timber groynes on Shoreham Beach for the East Lancing Sea Defence Commissioners. Quantities of Messrs. R. B. Grantham & Son, engineers, 5, Little College-street, Westminster, S.W. Deposit, £3 3s.

AUGUST 5.—**Hastings.**—PROMENADE.—Erection of extended promenade at the shore end of Hastings Pier, Hastings. Specification of the Borough Engineer, Mr. P. H. Palmer, M.Inst.C.E., Town Hall, Hastings.

* AUGUST 18.—**Bristol.**—ENGINEERING WORKS.—The Bristol Corporation invite tenders for engineering works, comprising boilers, h. and c. water and steam supplies, l.p. steam heating of buildings, and laundry machinery for new public baths, Gloucester-road, Bishopston.

No DATE.—**Conisborough.**—CONCRETE TANK.—Construction of a concrete tank water reservoir at Conisborough. Specifications from the Denaby and Cadeby Main Collieries, Ltd., Denaby Main, near Rotherham.

No DATE.—**Derby.**—PIPING.—For cast-iron piping, for the Corporation Electricity Department. Particulars of the Borough Electrical Engineer.

ROAD, SANITARY, AND WATER WORKS.

JULY 27.—**Bishop Auckland.**—STREET WORKS.—Making-up Bell-street for the U.D.C. Specifications of Mr Collins, Surveyor, Town Hall, Bishop Auckland.

JULY 27.—**Harrogate.**—DRAINS.—Construction of surface-water drains in Knaresborough-road and Silverfield district. Mr. C. E. Rivers, Borough Engineer, Municipal Offices.

JULY 27.—**Southampton.**—ROADS.—Asphalt macadamising works in Winchester-road, for the T.C. Specification at the Borough Engineer's Office. Deposit, £1 1s.

JULY 27.—**Wigan.**—PAVING.—For paving portions of Chapel-lane and Poolstock with granite setts. Quantities of Mr. A. T. Gooseman, Borough Engineer, Wigan. Deposit, £1 1s.

JULY 28.—**Edenderry.**—PUMP.—Sinking well and erecting pump at Tour, for the Edenderry No. 3 District Council. Specifications of Mr. C. K. Douglas, Roxbrook, Moyvelley.

JULY 28.—**Newburn.**—SANITARY.—Conversion of about fifty privies and ashpits into water-closets and dry ash receptacles at Lemington-on-Tyne. Specifications from Mr. Thomas Gregory, Surveyor, Council Offices, Newburn-on-Tyne.

JULY 28.—**Southgate.**—STREET WORKS.—Construction of about 370 lin. yds. of 33-in. surface-water sewer at Oakthorpe-road, Palmer's Green, and the widening and making-up of portion of same road; also about 375 lin. yds. of 9-in. surface-water sewer at Church-hill, Winchmore Hill, for the Southgate U.D.C. Specification of the Council Surveyor, Mr. C. G. Lawson, C.E., Council Offices, Palmer's Green, N. Deposit, £2.

JULY 28.—**Swansea.**—APPROACHES.—Reconstruction of the approaches to coal tips, Nos. 5 and 6, South Dock, Swansea, for the Great Western Railway Company. Quantities of the Engineer at Neath Station.

JULY 29.—**Axminster.**—SEWAGE WORKS.—Providing materials and constructing disposal works; also for supplying and laying about 4 miles of 15-in. 12-in., 9-in., 6-in. sewers, etc., for the Axminster R.D.C. Quantities from the engineers, Messrs. Phillott & George, 31, Promenade, Cheltenham. Deposit, £3 3s.

JULY 29.—**Colchester.**—WOOD BLOCK PAVING.—Laying of about 10,000 sq. yds. of wood block paving for the Corporation. Quantities of Mr. H. Collins, Borough Engineer, Town Hall. Deposit, £1 1s.

JULY 30.—**Hendon.**—SEWERAGE.—Construction of surface water sewer, Edgware; soil and surface water sewers, Pinner, and concrete invert for the R.D.C. Quantities of Mr. J. A. Webb, Surveyor, Stanmore-hill, Stanmore. Deposit, £2 2s.

JULY 30.—**Surbiton.**—DRAINAGE, ETC.—Construction of drains, roads, paths, etc., on cemetery site, for the U.D.C. Quantities of Mr. F. C. Wood, Clerk to the Council, Surbiton. Deposit, £3.

JULY 30.—**Swinefleet.**—WATER SUPPLY.—For laying-on water and improving ventilation of Swinefleet Council School. Specifications of Mr. Mr. E. L. Harrap, West Riding Education Offices, Goole.

JULY 31.—**Chipping Norton.**—SEWERAGE WORKS.—(1) Provision and laying of about 3,600 yards of earthenware pipe sewers, etc.; (2) extensions to existing outfall works, for the T.C. Quantities of the engineers, Messrs. Berrington, Son, & Watney, Prudential-chambers, Lichfield-street, Wolverhampton, and 28, Victoria-street, Westminster, S.W. Deposit, £5 5s.

AUGUST 1.—**Baldock.**—WATER WORKS.—Supplying and laying cast-iron water mains, etc., for the U.D.C. Quantities of Mr. T. H. Veasey, Clerk to the U.D.C. Baldock, Herts.

AUGUST 3.—**Middleton.**—SEWER.—Construction of a culvert in Gon Clough and sewer in Manchester New-road. Quantities from Mr. W. Welburn, Borough Surveyor, Town Hall, Middleton.

AUGUST 4.—**Portslade-by-Sea.**—DRAINAGE.—Construction of a main surface-water sewer of a length of about 1,900 yds., together with outfall works in the harbour, catchpit, manholes, and sundry works connected therewith. Quantities of Messrs. Chatterton & Alford, 9, Victoria-street, Westminstr, and at the offices of the U.D.C., Station-road, Portslade-by-Sea. Deposit, £2 2s.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* AUGUST 5. — **Hailsham.** — SEWERAGE AND SEWAGE DISPOSAL WORKS.—The Hailsham R.D.C. invite tenders for certain works in connection with sewerage and sewage disposal.

AUGUST 5. — **Huyton-with-Roby.** — STREET WORKS.—Paving with granite setts a length of Liverpool-road. Specification of the Surveyors to the Council, Public Offices, Huyton.

* AUGUST 13.—**Fleet.**—SEWAGE AND SEWERAGE DISPOSAL WORKS.—The Fleet U.D.C. invite tenders for construction of sewerage and sewage disposal works.

AUGUST 15.—**Denton.**—SEWAGE DISPOSAL.—Construction of twelve new circular percolating filters, together with humus tanks, automatic dividing chambers, and other works in connection therewith. Specifications of Mr. Jno. B. Cooke, Engineer and Surveyor to the Council, Town Hall, Denton. Deposit, £3 3s.

SEPTEMBER 2.—**Lanark.**—SEWERAGE WORKS.—The District Committee of the Middle Ward of the County of Lanark invite tenders for the construction of sewage tanks, access road, and relative works at Merryton and Brachead, and an outfall sewer from London-street, Larkhall. Specification of Mr. W. L. Douglass, M.Inst.C.E., District Engineer, District Offices, Hamilton. Deposit, £1.

NO DATE.—**Penistone.**—WATER PIPES.—Laying of 1,700 yds. of 8-in. iron pipes, from the top of Green-road, Penistone, to Racecommon Quarry. Mr. Chas. Hodgkinson, Clerk to the Council, Penistone.

Public Appointments.

* JULY 30.—TEACHER OF QUANTITY SURVEYING AND LAND SURVEYING.—The L.C.C. invite applications for the above post. Salary, £175 per session.

* AUGUST 5.—ARCHITECTURAL ASSISTANT.—The Hove Corporation invite applications for the above temporary post. Salary, £3 3s. per week.

* AUGUST 5.—BUILDING INSPECTOR.—The Hove Corporation invite applications for the above post. Salary, £3 per week.

* SEPTEMBER 18. — DISTRICT SURVEYOR. — The L.C.C. invite applications for the above post.

Auction Sales.

* JULY 27.—**Chiswick.**—Messrs. Elliott, Son, & Boyton will sell by auction, at the Mart, building land.

* JULY 28.—**Blackheath Hill.**—Messrs. Veryard & Yates will sell by auction the building materials arising from demolition of residence.

* JULY 28.—**Kingston-on-Thames.**—MR. A. G. Honsor will sell by auction the stock of a hardwood timber merchant.

* JULY 29.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

[Those with an asterisk (*) are advertised in this issue.]

PRICES CURRENT OF MATERIALS.

**** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 16 6
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.

	£ s. d.		£ s. d.
Flettons	1 14 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0
GLAZED BRICKS—			
Best White, Ivory, and Salt Glazed Stretchers	13 0 0	Double Headers	15 10 0
Headers	12 10 0	One Side and two Ends	19 10 0
Quoins, Bullnose and 4½ in. Flats	16 10 0	Two Sides and one End	20 10 0
D'ble Str'tch'rs	18 10 0	Splays and Squints	18 0 0

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	7	3 per yard, delivered.
Thames Ballast	5	9 " "
Best Portland Cement	37	0 per ton, "
Best Ground Blue Lias Lime	20	0 " "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 14s. 0d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton, at rly. dpt.

STONE.

Per Ft. Cube.

	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

Per Ft. Cube, delivered at Railway Depôt.

	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 0

Per Ft. Super., Delivered at Railway Depôt.

6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.

In. In.	£ s. d.	In. In.	£ s. d.
20 × 10 best blue Bangor	13 2 6	20 × 10 best Eureka unfading green	15 17 6
20 × 12 ditto	13 17 6	20 × 12 ditto	18 7 6
20 × 10 1st q'lity ditto	13 0 0	18 × 10 ditto	13 5 0
20 × 12 ditto	13 15 0	16 × 8 ditto	10 5 0
16 × 8 ditto	7 5 0	20 × 10 permanent green	11 12 6
22 × 10 best blue Portmadoc	12 12 6	18 × 10 ditto	9 12 6
16 × 8 ditto	6 12 6	16 × 8 ditto	6 12 6

TILES.

At Railway Depôt.

	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz)	3 6
Best Ruabon red, brown, or brindle (Edw'ds)(pr1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz)	3 0	Valley (per doz)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.		£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15 0 0	..	16 10 0
Deals: best 3 in. by 9 in.	15 0 0	..	16 0 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	12 10 0	..	13 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0		less than 7 in. and 8 in.
Deals: seconds	1 0 0		less than best
Battens: seconds	0 10 0		" "
2 in. by 4 in. and 2 in. by 6 in.	11 10 0	..	12 10 0
2 in. by 4½ in. and 2 in. by 5 in.	10 10 0	..	11 10 0
Foreign Sawn Boards— 1 in. and 1½ in. by 7 in.	0 10 0		more than battens.
¾ in.	1 0 0		"
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0	..	6 5 0
Seconds	4 10 0	..	5 0 0
Small timber (8 in. to 10 in.)	3 17 6	..	4 6 0
Small timber (6 in. to 8 in.)	3 5 0	..	3 10 0
Swedish balks	2 12 6	..	3 0 0
Pitch-pine timber (30 ft. average)	7 0 0	..	8 0 0
JOINERS' WOOD.	At per standard.		
White Sea: first yellow deals, 3 in. by 11 in.	26 0 0	..	27 0 0
3 in. by 9 in.	24 0 0	..	25 0 0
Battens, 2½ in. and 3 in. by 7 in.	18 10 0	..	19 10 0
Second yellow deals, 3 in. by 11 in.	21 10 0	..	22 10 0
Do. 3 in. by 9 in.	20 0 0	..	21 0 0
Battens, 2½ in. and 3 in. by 7 in.	15 0 0	..	16 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	16 0 0	..	17 0 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0	..	15 0 0
Petersburg: first yellow deals, 3 in. by 11 in.	23 0 0	..	24 0 0
Do. 3 in. by 9 in.	20 0 0	..	21 0 0
Battens	15 0 0	..	16 0 0
Second yellow deals, 3 in. by 11 in.	17 10 0	..	18 10 0
Do. 3 in. by 9 in.	16 0 0	..	17 0 0
Battens	12 10 0	..	13 10 0
Third yellow deals, 3 in. by 11 in.	14 0 0	..	15 0 0
Do. 3 in. by 9 in.	13 10 0	..	14 10 0
Battens	11 10 0	..	12 10 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16 10 0	..	17 10 0
First white deals, 3 in. by 9 in.	14 10 0	..	15 10 0
Battens	13 0 0	..	13 10 0
Second white deals, 3 in. by 11 in.	14 10 0	..	15 10 0
Second white deals, 3 in. by 9 in.	13 0 0	..	14 0 0
Battens	12 0 0	..	12 10 0
Pitch-pine: deals	28 0 0	..	30 0 0
Under 2 in. thick extra	0 10 0	..	1 0 0
Columbian or Oregon Pine, best quality	24 0 0	..	26 10 0
Yellow Pine—First, regular sizes	50 0 0		upwards.
Oddments	35 0 0		"
Seconds, regular sizes	36 0 0		"
Oddments	31 0 0		"
Kauri Pine—Planks per ft. cube	0 6 6	..	0 7 6
Danzig and Stettin Oak Logs— Large, per ft. cube	0 3 0	..	0 3 0
Small " "	0 2 6	..	0 3 0

WOOD (*Continued*).

JOINERS' WOOD (*Continued*)—	£ s. d.		£ s. d.
Wainscot Oak Logs, per ft. cube	0 8 0	..	0 10 0
Dry Wainscot Oak, per ft. super. as inch	0 0 10	..	0 1 2
¼ in. do. do.	0 0 9	..	0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super. as inch	0 0 10	..	0 1 3
Selected, Figury, per ft. super. as inch	0 1 6	..	0 2 6
Cuba Mahogany	0 1 4	..	0 2 6 upwards.
Dry Walnut, American, per ft. super. as inch	0 0 10	..	0 1 2
French, "Italian," Walnut	0 0 10	..	0 1 4
Teak, per load (Rangoon or Moulmein)	25 0 0	..	31 0 0
Do., do. (Java)	22 0 0	..	25 0 0
American Whitewood planks, per ft. cube	0 6 0	..	0 7 0
Prepared Flooring, etc.—	Per square.		
1 in. by 7 in. yellow, planed and shot	0 14 6	..	0 18 0
1 in. by 7 in. yellow, planed and matched	0 14 9	..	0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 17 6	..	1 3 0
1 in. by 7 in. white, planed and shot	0 14 0	..	0 16 0
1 in. by 7 in. white, planed and matched	0 14 3	..	0 16 6
1¼ in. by 7 in. white, planed and matched	0 16 6	..	0 18 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0 12 6	..	0 15 0
1 in. by 7 in. "	0 15 0	..	0 18 6
¾ in. by 7 in. white "	0 12 0	..	0 14 0
1 in. by 7 in. "	0 14 6	..	0 16 6

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.		£ s. d.
Rolled Steel Joists, ordinary sections	9 0 0	..	10 0 0
Compound Girders, ordinary sections	11 0 0	..	12 0 0
Steel Compound Stanchions	12 0 0	..	13 0 0
Angles, Tees, and Channels, ordinary sections	11 0 0	..	12 0 0
Flitch Plates	11 0 0	..	12 0 0
Cast Iron Columns & Stanchions, including ordinary patterns	8 10 0	..	9 0 0

METALS.

	Per ton, in London. £ s. d.		£ s. d.
IRON— Common Bars	9 0 0	..	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0	..	9 15 0
Staffordshire "Marked Bars"	11 0 0	..	—
Mild Steel Bars	9 5 0	..	9 15 0
Hoop Iron, basis price	10 0 0	..	—
" " Galvanised	17 10 0	..	—

(* And upwards, according to size and gauge.)

Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0	..	—
" " 24 g.	11 5 0	..	—
" " 26 g.	12 15 0	..	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0	..	—
Ordinary sizes to 22 g. and 24 g.	16 0 0	..	—
Ordinary sizes to 26 g.	17 0 0	..	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0	..	—
" " 22 g. and 24 g.	19 0 0	..	—
Ordinary sizes to 26 g.	20 10 0	..	—
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	15 0 0	..	—
Ordinary sizes, 22 g. and 24 g.	15 5 0	..	—
Ordinary sizes, 26 g.	16 15 0	..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0	..	—
Best Soft Steel Sheets, 22 g. & 24 g.	13 10 0	..	—
Best Soft Steel Sheets, 26 g.	15 10 0	..	—
Cut Nails, 3 in. to 6 in.	11 0 0	..	11 10 0

(Under 3 in., usual trade extras.)

LEAD, &c.

Delivered in London.

		£	s.	d.		
LEAD—Sheet, English, 4 lb. and up		23	0	0	..	—
Pipe in coils		23	10	0	..	—
Soil pipe		26	10	0	..	—
Compo pipe		26	10	0	..	—
ZINC—Sheet—	In casks of 10 cwt.					
Vielle Montagne		27	10	0	..	—
Silesian		27	0	0	..	—
Zinc, in bundles, 1s. per cwt. extra.						
COPPER—						
Strong Sheet	per lb.	0	1	1	..	—
Thin „	„	0	1	2	..	—
Copper nails	„	0	1	1	..	—
Copper wire	„	0	1	1	..	—
BRASS—						
Strong Sheet	„	0	1	1	..	—
Thin	„	0	1	2	..	—
TIN—English Ingots	„	0	1	7	..	—
SOLDER—Plumbers'	„	0	0	8	..	—
Tinmen's	„	0	0	11	..	—
Blowpipe	„	0	1	1	..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3½d.
„ fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	„ fourths	4½d.
„ fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	„	21 oz. 4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.
¼ Rough rolled and rough cast plate	2½d.
¼ Rough rolled and rough cast plate	3d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	2	3
„ „ „ in barrels	„	0	2	4
„ „ „ in drums	„	0	2	6
Boiled „ „ in barrels	„	0	2	6
„ „ „ in drums	„	0	2	9
Turpentine in barrels	„	0	2	10
„ in drums	„	0	3	0
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)		30	5	0
Red Lead, Dry	per ton	28	10	0
Best Linseed Oil Putty	per cwt.	0	9	0
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	6
Fine Elastic Carriage	0	12	9
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	10	0
Finest Pale Durable Copal	0	18	6
Extra Pale French Oil	1	1	0
Egyptell Flating Varnish	0	18	0
White Pale Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	0
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	6
French and Brush Polish	0	10	0

TO CORRESPONDENTS.

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TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us not later than 6 p.m. on Wednesday. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100l. unless in some exceptional cases and for special reasons.]

*Denotes accepted. †Denotes provisionally accepted.

AYLSHAM.—Repairs to roof of the Workhouse, for the Board of Guardians:—
Blyth, Jun., Foulsham* £103 10

BARNET.—For erection of a home for infants at Wellhouse-lane, Barnet, for the Barnet Guardians. Messrs. Williams & Cox, architects, 34, Henrietta-street, Covent Garden, W.C.:—
J. Thomas, 6, Holtwhites-hill, Enfield ... £2,165

BIGGLESWADE.—For alterations to Unionist Club, for the Committee:—
C. Wright, Langford* £426 4

BIRMINGHAM.—Extension of Selly Oak Police-station, for the Corporation:—
S. F. Swift* £1,134

BOCKING.—For building work and repairs and painting and decorating at the Friars, Bradford-street, for the Braintree Board of Guardians:—
Building and Repairs.
A. Brown & Son, Station Works, Braintree, Essex* £230 0
Decorating and Painting.
Eve & Son, Bocking* 55 0

BRIXTON.—Cleansing and repairs at the City Orphan School, for the City Corporation:—
T. Osborne & Sons* £340

CAMBRIDGE.—For erection of a school at Chedworth-street, for the Corporation. Mr. H. H. Dunn, architect, County Hall, Cambridge:—

Jeffs Bros.	£2,902	Kidman & Sons	£2,574
H. E. Ambrose	2,853	Coulson & Lofts	2,560
W. Bell & Sons	2,779	H. Rooke & Sons	2,555
Hackaley Bros.	2,777	J. Brignell	2,550
G. Henson & son	2,730	J. R. Bennett & Sons, Gwydir-street, Cambridge*	2,538

CHEADLE HULME.—Erection of Parish Room, for the Church Council:—
Fernley & Co., Pendleton* £927

DARTFORD.—For repairs and improvements to County School for Girls, for Kent Education Committee. Mr. W. H. Robinson, M.S.A., architect, Sessions House, Maidstone:—
Part I.

Friday & Ling, Erith†	£240
Treasure Bros.	228
E. E. Beaven	190
Part II.	
Treasure Bros.	145
Friday & Ling†	129

DEPTFORD.—Paving various roads, for the Deptford Borough Council:—

Fry Bros., Ltd., Greenwich (Arica-road)*	£807 17
W. Pearce (Avignon-road)*	279 0
A. E. Etteridge (Revelon-road)*	934 0
Fry Bros., Ltd. (St. Norbert-road)*	249 0

EPSOM.—Erection of walls at Rosebery Park, for the Urban District Council:—
G. Skelton* £152 13 3

EPSOM.—For fencing at Rosebery Park, for the Urban District Council:—
Miller & Son, Ltd., Wolverhampton,* at 7s. 8d. per yard 4 ft. high, 8s. 9d. per yard 5 ft. high, and wrought-iron gates at £7 10s. per pair.

GRIMSBY.—For painting work at schools of the Town Council:—

C. Cole, Ltd.*	Harold-street schools	£280 1 8
	Edward-street school	273 3 0

GRIMSBY.—For additions, repairs, etc., at Holme Hill School, for the Corporation:—
D. Seamer* £1,030 14 1

HITCHIN.—Erection of isolation hospital near Letchworth, for the Hitchin Rural District Council. Mr. H. Adams, F.R.I.B.A., architect:—

F. Newton	£8,448 0
C. Miskin & Son	8,363 0
W. Corah & Son	8,062 2
Kidman & Sons, Cambridge*	7,923 0

[Nineteen other tenders were received.]

LAIRG.—Water supply works at Lairg Village, for the Sutherland County Council:—
A. M'Millan & Co., Lairg* £308 18 5

LITTLE HADHAM.—Erection of four cottages, for the Rural District Council:—
A. J. Markwell & Sons, Bishop's Stortford* £747

LONDON.—For painting interior of Wormington-road School, Kensington, for the London County Council:—

General Building Co.	£798 10	Whitby Bros.	£741 10
Stevens & Sons	780 0	W. Chappell, 243, Elgin-avenue, Maida-vale*	649 0
W. S. Barton & Co.	777 0		
F. W. Lousby & Co.	770 0		

LONDON.—Construction of penstock chamber, etc., at Lewisham, for the London County Council:—

J. Cochrane	£215
Markham & Co., Ltd.	210
Glenfield & Kennedy, Ltd.	185
J. Blakeborough & Sons, Brighouse*	155

LONDON.—Painting, etc., at Victoria embankment-gardens, for the London County Council:—

Chittenden & Simmons, Ltd.	£199 0
A. C. W. Hobman & Co., Ltd.	170 0
J. Smart & Son	165 15
Constable, Hart, & Co., Ltd., 41, Eastcheap, E.C.*	163 0

LONDON.—Enclosing land, etc., at Sleaford-street School, Clapham, for the London County Council:—

T. Hooper & Son	£575	F. W. Fletcher	£285
Lole & Co.	49	Triggs & Co.	3s6
A. & F. Polden	440	J. Garrett & Son, 83, Balham-hill*	314
J. & C. Bowyer, Ltd.	389		

LONDON.—Enlargement of the Southfield School, Wandsworth, for the London County Council:—

T. Bendon, Ltd.	£1,826 17 6	Lole & Co.	£1,704 0 0
W. Willett	1,769 0 0	F. W. Fletcher	1,695 0 0
Triggs & Co.	1,765 0 0	W. King & Son	1,148 0 0
Rice & Son	1,749 0 0	J. & C. Bowyer, Ltd.	1,636 0 0
S. N. Soole & Son	1,722 0 0	J. Garrett & Son, 83, Balham-hill*	1,591 0 0
Markham & Markham	1,709 0 0		

LONDON.—Improving heating arrangements at the Marlborough School, Chelsea, for the London County Council:—

Palowkar & Sons	£350
Brightside Foundry and Engineering Co., Ltd.	375
Yetton & Brockett, Ltd.	370
G. Davis	348
R. H. & J. Pearson, Ltd.	321
L. Norden	319
G. & E. Bradley	319
W. G. Cannon & Sons, Ltd.	307
W. Wathin & Son	274
J. & F. May, 35, Whetstone-park, Lincoln's Inn-fields*	254

LONDON.—Rebuilding of Haverstock-hill School, for the London County Council:—

W. Lovatt & Sons, Ltd.	£28,375	5
W. Lawrence & Son	27,814	0
A. Fairhead & Son	27,390	0
Perry & Co. (Bow), Ltd.	27,205	0
C. P. Roberts & Co., Ltd.	26,597	0
W. E. Blake Ltd.	26,559	0
J. & C. Bowyer, Ltd.	26,534	0
Brand, Pettit, & Co.	26,244	0
G. E. Wallis & Sons, Ltd.	26,179	0
McCormick & Sons, Ltd.	25,987	0
Rowley Bros.	25,891	0
Holliday & Greenwood, Ltd.	25,858	0
G. Godson & Sons	25,294	0
C. Wall, Ltd., Upcerne-road, Chelsea*	24,931	0

LONDON.—Installing heating apparatus at Woolmore-street, Poplar, for the London County Council:—

Yetton & Brockett, Ltd.	£7 5 0
E. Deane & Beale, Ltd.	699 10
Strode & Co., Ltd.	698 0
Palowkar & Sons	698 0
W. G. Cannon & Sons, Ltd., 107, London-road*	695 0

LONDON.—Improving heating arrangements at Hugon-road School, Fulham, for the London County Council:—

Palowkar & Sons	£720
E. Deane & Beale, Ltd.	570
G. & E. Bradley	554
Arding & Dyne	546
G. Davis	505
J. & F. May	480
Cannon & Hefford	465
R. H. & J. Pearson, Ltd., Notting-hill-gate*	443

LONDON.—For painting and cleaning schools the London County Council have accepted the following tenders:—

	Holborn.			
Central School of Arts and Crafts	A. J. Stoines & Co., Ltd.	£554	0	0
	Westminster.			
Westminster Technical Institute	Markham & Markham	531	0	0
	Clapham.			
Tennyson-street Ponton-road place of detention	W. Young	365	14	6
	H. Line	293	0	0
	Kennington.			
Beaufoy Institute	J. Scott Fenn	297	15	0
	Outside the County.			
Portslade Industrial School	J. Garrett & Sons	320	0	0
	Brixton.			
Brixton School of Building	W. A. King	121	10	0
	Camberwell, N.			
Camberwell School of Arts and Crafts	A. Coldman & Son	122	6	8
	Hackney, C.			
Hackney Institute	H. Newell	118	0	0
	Norwood.			
Norwood Technical Institute	T. Brown & Son	63	0	0

LLANBEDR.—For erecting a new C.M. chapel. Messrs. O. Morris, Roberts, & Son, architects, Portmadoc:—
R. M. Lewis, Penrhyndeudraeth* £1,600

MALDON.—For supply of 575 yds. of 3-in. cast-iron water main, for the Corporation:—
A. G. Clarke* ..... £5 15 per ton

MARGATE.—For summer decorations and sundry alterations, Royal School Deaf and Dumb Children, under the supervision of Mr. Frank Windsor, Lic.R.I.B.A., 1, High-street, Croydon:—

Wales	£596‡	£120‖	£151§
Stiff	570‡	119	148§
Paramor*	557‡	113‖	141§

‡ Spec. A. ‖ Spec. B. § Spec. C.
[All of Margate.]

PONTYPRIDD.—For private street works, for the Urban District Council:—

S. J. Hill (Jenkins-street)*	£373 11 6
S. J. Hill (Lane off Tram-road)*	180 18 0
W. J. Davies (Landraw-road)*	516 15 6

POOLE.—For alterations to heating apparatus, etc., at Heatherlands School, for the Corporation:—
A. G. Strudwicke* £114 17 6

PORTSMOUTH.—Erection of public elementary school at Southsea, for the Portsmouth Education Committee:—

Wakeham Bros.	£21,972	E. & A. Springings	£20,958
W. W. Evans	21,086	J. Harding	20,848
J. Croad	21,075	J. Cockerell	20,245
J. Tanner	21,052	F. J. Privett, Portsmouth*	19,609
S. Salter	21,021		

ROCHESTER.—Painting the Corn Exchange, for the Corporation:—
W. J. Parks, Ltd.* £299

SOUTHAMPTON.—For works in connection with the erection of refuse destructor, for the Corporation:—

Britannia Construction Co., London*—	
Chimney	£389
Dyer & Sons, Southampton*—Foundations, compressor-house, etc.	1,327
T. Warrington, Manchester* — Destructor cells and boilers	1,221

TALSARNAU.—For new house for Captain Lloyd:—
R. M. Lewis, Penrhyndeudraeth* £353

TORQUAY.—For formation of roads and construction of sewers on the Audley Park Building Estate. Mr. F. G. Moore, M.A., B.Sc., architect and surveyor, 9 and 10, Fleet-street, Torquay:—
R. F. Yeo & Sons, Torquay† £1,061
[Architect's estimate, £1,100.]

WALTHAMSTOW.—For improvements to heating, Markhouse-road Schools (Junior Mixed and Infants' Departments), for the Education Committee. Mr. H. Prosser, M.S.A., Architect to the Committee:—
Wilmer & Sons, London, E.C.* £215

WALTHAMSTOW.—For providing and fixing new sectional boiler and removal of old wrought-iron boiler and incidental works, William Morris School, for the Education Committee. Mr. H. Prosser, M.S.A., Architect to the Committee:—

	Robin Hood Boiler.	Alternative Boiler.
Watkin & Son	£110 0	£90 0
J. D. Boyd & Co.	106 13	97 16
W. Cassidy	106 0	89 12
Wontner-Smith, Gray, & Co., Ltd.	105 0	99 15
Russell & Co.	98 14	88 14
F. Davies, Leyton	83 10	*82 0

WALTHAMSTOW.—For exterior painting and sundry renewals and repairs to the Marsh-street old school and school canteen centre, for the Education Committee. Mr. H. Prosser, M.S.A., Architect to the Committee:—

E. Fuller & Son	£121 0	J. & J. Dean	£92 0
A. G. Barton	98 10	J. F. Penn	90 0
D. W. Lucas	95 0	J. Sands	83 10

[All of Walthamstow.]

WEST HAM.—For installing electric light at Rosetta-road School, Custom House, for the Education Committee of the County Borough of West Ham. Mr. William Jacques, A.R.I.B.A., Architect to the Committee, 2, Fen-court, London, E.C.:—

Bristow Bros.	£1,013 13 0
Flower & Co.	897 13 6
West Ham Electric	889 8 0
McMillan & Co.	848 0 0
Smeeton & Page	844 5 9
Cathcart & Co.	835 0 0
Stegmann & Co.	797 18 6
Prockter & Co.	795 0 0
A. Newman, Ltd.	750 0 0
Nickolls & Son	707 10 0
Malcolm & Allen	682 0 0
J. Biggs	68 0 0
Dickinson & Co.	655 0 0
Weston & Sons, Ltd.	641 0 0
Vaughan & Co.	639 0 0
Steel & Co.	625 0 0
Defries & Colman	620 0 0
Lund Brothers & Co.	611 0 0
J. T. Halsey, 24, Great Eastern-road, Stratford, E.*	538 0 0

WESTMINSTER.—For internal and external painting, etc., works, at the Marshall-street establishment, for the City Council:—

Green & Abbott	£840 0	Markham & Markham	£569 0
T. Carr	695 1	Wright & Son	525 0
J. R. Sims	691 0	Campbell & Christmas*	494 0
Burton Bros.	635 0		

WESTMINSTER.—For alterations, etc., to six urinals, for the Westminster City Council:—

Dent & Hellyer, Ltd.	£623 0 0
Davis, Bennett, & Co.	441 0 0
W. E. Farrer, Ltd.	350 4 4
Doulton & Co., Ltd.	331 5 0
B. Finch & Co.‡	296 6 8

‡ Accepted less £27 13s. 6d. for one work which the Council have decided to omit.

WHITSTABLE.—For the Oxford-street cookery room, for Kent Education Committee. Mr. Wilfrid H. Robinson, M.S.A., architect:—

G. Reeves	£890	L. T. Dadds	£704
T. Porter	850	E. Solly	698
Wyver, Nicholls, & Co.	790	G. Browning, Canterbury†	683
Edwards	775		
T. Collar	765		

WINDSOR.—For painting Trinity, Victoria-street, and Royal Free Schools, for the Corporation:—
F. Greening* £118 10

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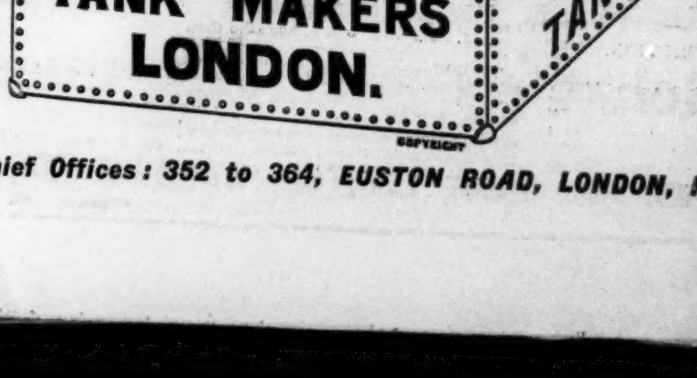

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